ACTIVITIES OF A LIFETIME

DR. J. A. MUNK

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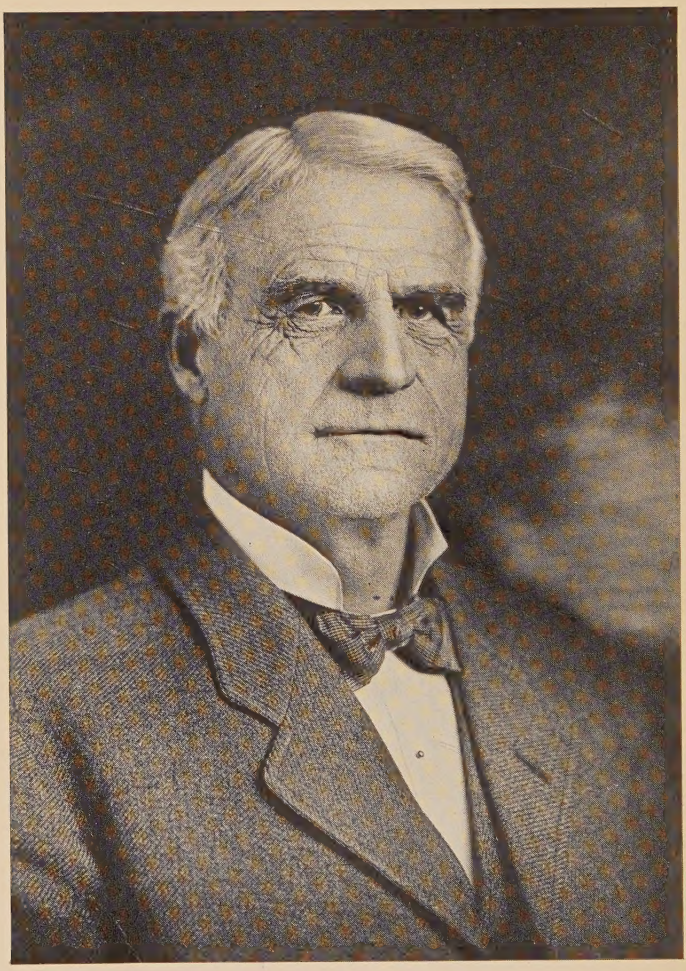

DR. J. A. MUNK

ACTIVITIES OF A LIFETIME

By

Joseph Amasa Munk, M. D.

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ACTIVITIES OF A LIFETIME

Early Recollections

I WAS BORN November 9, 1847, on a farm near the village of North Georgetown, Columbiana County, Ohio. I was the third of six children, my two sisters, Mary and Anna, being older, and my three brothers, Ephraim, Edward and William, all younger.

My childhood was the experience of the average country lad living on an Ohio farm sixty-five years ago. During the advancing years came periods of work, study and play, according to the duties of the hour and the season of the year.

It may be of interest to relate here some of my early experiences as I recall them at this date.

In the early days of primeval forests and primitive life, there was no coal or oil used and wood was the exclusive fuel. The wood was cut and piled in a heap on dry ground near the house, to be used as needed on the hearth of the living room or in the kitchen stove. The wood was cut with either an axe or hand saw, and the accumulated chips and sawdust made considerable of a low flat mound in the course of time. This spot became our family playground where we youngsters met almost daily and built our

fairy air-castles and played our simple games until we became weary of the sport. It was our favorite resort where we spent many happy hours.

My first adventure out into the big world, that I can remember, was when we went a-fishing. We had been warned not to leave the dooryard nor take the risk of going down to the meadow brook to wade in its shallow waters. Somehow, we got the idea that we wanted to fish, and fishing we went. Our tackle consisted of sticks that we used as poles, wrapping cord which served as fish-lines, and bent pins that answered the purpose of hooks. The hooks were cast into the water without bait and, of course, we caught nothing. Pretty soon mother missed us from our accustomed playground, and after hunting and finding us gave us all a spanking and marched us home in a row, crying, with the admonition never to go near the water again.

During the early fifties father sold his Mahoning bottom farm and moved to Salem, Ohio, where he bought a house in town and another farm one mile south of town.

Shortly after we got settled in our new home in town, a neighbor's wife took sick and died. I attended the funeral and saw the corpse lying in the

coffin. The casket was made of walnut wood which has a strong odor that scented the whole house. Ever since then the smell of walnut wood has been offensive and is a reminder of a funeral.

An event of a later date made another lifelong impression. In playing on the street one day I saw a man smoking a cigar, but knew nothing of the evil habit nor its injurious effects. Seeing a man doing the act, I concluded that it must be a necessary qualification of manhood. As every boy wants to become a man as soon as possible, I picked up a discarded cigar stub off the street and pretended to smoke it. I must have swallowed some of the tobacco juice and soon became deathly sick. I wandered into the garden and fell unconscious among some currant bushes, where I was found and carried into the house. After I revived and explained what had happened, I was told to let tobacco alone, which advice I obeyed and have not touched it since.

My father did not use tobacco in any form but all my brothers smoke moderately.

My father contemplated building a new house on the farm and making it his home. He had the lumber cut from local timber and stacked the boards in a dry-kiln to cure.

When the lumber was nearly dry, it caught fire from the furnace and burned up. Again he assembled material for the building and, just as he had the task about completed, a violent tornado came along and the wind blew the boards away, scattering the broken pieces over the entire countryside. Meeting with two such disasters in his building program he felt completely discouraged, and, believing that fate was against him, he abandoned his plans. He sold the farm where he expected to build, also the town property in Salem, and bought a new farm one-half mile south of Mount Union, which was afterwards incorporated into the town of Alliance, Ohio. The place was selected on account of its having a substantial farm house, its nearness to town and excellent educational facilities, which consisted of a public school and a literary college. In this homestead the children grew to maturity and then scattered to seek their individual fortunes. The daughters married and found homes of their own. The sons attended college and graduated, the two older ones in medicine and the two younger ones in law.

In the course of time the aged parents sickened and died and were buried in the village graveyard, on a hillside, where they rest in peace.

I was four years old when we moved to Salem, seven years old when we went to Mount Union, and less than eighteen when I was discharged from the army at the close of the Civil War in 1865. On this farm and in its vicinity I acquired my knowledge of farming during my boyhood days.

My father, Jacob Munk, and my mother, Maria Roseberry Munk, were gentle folk, who liked their work and loved their home and family. My mother's motto for promoting diligence was "schaffen und sparen" (work and save), which maxim was faithfully impressed upon us children and taught us many useful lessons in thrift and economy. We had to be corrected sometimes but I do not recall that we ever received any severe whippings. I presume that we were the same as average children, but were taught obedience, love of home and consideration for our elders and for one another. We sometimes needed a spanking and got it, too, but our crying was more from fright than from hurt. Mother's custom of applying the slipper was by using her bare hand. After one of these episodes, I heard her muttering to herself, as she turned away rubbing her hand, that she believed the punishment hurt her more than it did me. After that I did not mind her spanking as

I had good reason to believe she was getting the worst of the bargain.

In making plans for the new home, one of the first things that father did was to plant a family orchard of deciduous fruit trees, which was a great joy to us children later when the trees came into bearing. During the interval of growth, we depended upon wild fruits for our home supply, such as raspberries, blackberries, elderberries, and wild plums and grapes. After the family needs were supplied, any surplus was sold to our neighbors, which gave us some pin money.

Elderberries, particularly, were abundant and were used both fresh and dried; and we all liked them. To gather the bunches was an easy task but to pick the berries from the stems was slow and tedious work. I invented a contraption that we called an "Elderberry Sheller," which was quite a success. It consisted of a cylinder fastened into a wooden box and made in imitation of a threshing machine. The cylinder was made of two round end boards that were connected by a score or more of rattan rods, salvaged from the frame of an old discarded hoop-skirt. The shaft on which the cylinder revolved was

also made of wood as, indeed, were all other parts of the machine.

The motive power was furnished by mother's large, old-fashioned spinning wheel, and a stout twine cord served as a belt that operated the pulley and cylinder. When the big wheel was turned by hand at a moderate speed, it caused the cylinder to revolve rapidly. The elderberry bunches were held loosely against the rapidly revolving drum, which quickly stripped the stems clean of berries without crushing them. The separation of the berries from the stems was done much more rapidly and neatly by the machine than when done by hand. A tubful of elderberries could be prepared in this manner in a short time for drying and the work of handling them was converted into a pleasant pastime.

When the taste for elderberries is once acquired, they make a very satisfying fruit. The berries can be stewed and served as a sauce or can be made into a pie, and the juice makes an excellent wine.

Among the first fruits that resulted from home production in the orchard, were several trees of early sweet cherries. Almost before the cherries were ripe, the birds found and feasted on them. The red-

headed woodpecker was the worst offender and the principal object of our wrath. We spent some time devising means for its destruction before we succeeded.

Just how we got the idea to beat the birds I do not remember, but the means was effective even if it was severe. We observed that whenever a bird flew into a tree it always lit upon some topmost branch where it could be seen against the sky. This peculiarity of its habit was used in accomplishing its destruction. We cut down a slender tree that was as tall as the cherry tree and trimmed it into a bare pole. The pole was erected near the bole of the cherry tree, with its tip projecting above the tree and its base fixed firmly in the ground. When a woodpecker flew into the tree, it would alight with its breast against the pole. One of us boys under the tree watched its arrival and with a big wooden maul hit the pole a hard blow. This gave the bird heart failure, when it came tumbling out of the tree and fell dead upon the ground. The deed could not be called cruel as it caused no pain, and was excusable when done by heedless boys, but would not have been justifiable if done by full-grown men.

The primeval forests were most attractive because of their natural charm and beauty, and never failed to interest the true lover of nature. That they had to be despoiled, and partly destroyed by the vandal hands of civilized man, was to be regretted.

In the early days the forests furnished the raw material for heating and the timber for building houses.

The small trees were used for fire-wood, while the large trees were cut into logs and made into boards in a saw mill.

The timbers used in building were hewn from green trees, scored and squared with an ax, adz and broad-ax, and joined by mortise and tenon into a frame that was erected for a house.

A house raising was usually celebrated as a gala day, when the men of the neighborhood gathered for the job and gave their help gratis, but were rewarded with a feast of a bountiful and well cooked country dinner.

The woodmen were, as a rule, big, stalwart, clean looking fellows and in the full vigor of manhood, who knew how to swing an ax. They would cut down and trim a big tree in no time. I remember dis-

tinctly, when I was fortunate to be with a gang of woodchoppers, how I tried to get as near them as possible without getting in their way, in order to catch the smell of healthy sweat from their bodies, which, mingled with the odor of freshly cut wood, made a fragrance that was finer than perfume. To hear and see these men at work was more interesting than watching any performance on a stage; and the sound of ringing axes, as it rose and fell in rhythmic cadence, was as sweet music to the ear.

Learning to chop wood is hard work for the novice but by practice it soon becomes an easy task. Not only did firewood have to be cut for house use, but the land had to be cleared of trees so that it could be plowed and seeded to grain.

Large quantities of cordwood were cut for the town market, and trees of suitable size and quality had to be selected and split into thousands of fence rails. In those days the fences were all built of split rails, in zigzag or worm fashion, with stakes and riders to hold them down. The farm thus fenced into fields added much to the picturesqueness of the landscape.

My first money earned away from home was by cutting cordwood for Joel Harris, at seventy-five

cents a day, walking two miles to and from my work. I managed to cut and rank two full cords of four foot wood in a day, which I was told was doing pretty well for a boy. It gave me money that I needed, and the added pleasure of hearing the ring of the ax and watching the chips fly was clear velvet.

I learned by experience that a good ax-handle will last a skilful ax-man many years and, in careful hands, even a lifetime. A good wood-chopper always makes a true stroke and seldom misses. If a false stroke is made it wrenches the handle, when it is easily splintered and broken. This quality of strain belongs to all farm implements and must be understood if the tools are kept in working order. Many workmen never learn this lesson and through ignorance and careless handling are liable to break every tool they touch.

Nearly every farm had its "sugar bush," or grove of maple trees, for running sap and making sugar during the months of February and March. The joy of those warm, sunny days when the frost came out of the ground and the air was soft and balmy, are memories to be forever cherished. It meant a change to camp life in the woods and freedom for a brief spell from the usual farm routine. It was also a

reminder of Indian life and recalled thrilling stories that I had read of hunting adventures in the woods. The sugar season was opened by tapping the trees with an auger, inserting a spile into the hole, when the sap immediately commenced to drop. It was caught in wooden hand-made troughs or buckets, or stone jars, that were emptied twice a day.

The sap was gathered every morning and evening, in a barrel on a sled drawn by a horse, and emptied into large kettles or vats, and boiled down into a syrup and made into sugar at a central camp. This variety of sugar has a particularly pleasant flavor, which makes it very alluring, and we children just reveled in it.

I have always been a lover of nature and of the outdoor life. As a boy, I spent much time exploring the fields and forests trying to find out their secrets. Every season had its attraction and the lure of the trail, in whatever direction it led, always fascinated me. The flowers and trees first claimed my attention, and the cool, shady woods held a mystery that was a perpetual incentive to action. I imagined that in the leafy dells some fairy sprites might be found dancing, or that from the dark depths of the forest a bear might suddenly jump out and catch me.

A child's thoughts naturally run to fancies and anything that is imagined can easily be made to seem very real.

A large variety of trees grew in the forests and many of them I soon learned to recognize, and could name on sight. Among the more common trees were the beech, maple, elm, poplar and linden; but a group of nut-bearing trees held the greatest attraction, such as hickory, chestnut, walnut and butternut, as they produced something good to eat. This appealed directly to a hungry boy's stomach, and when was there ever a healthy boy that did not have a ravenous appetite to appease or entice him?

When the fall of the year came around, we were keen to have the nuts ripen quickly and fall out of their shells to the ground for us to gather. Where a tree grew in an open space in a field, its crop of nuts was apt to ripen earliest. After a windy night there was sure to be an extra large fall of nuts to reward an early visit, and on such a morning we never failed to be on the ground promptly, each boy trying to get there first, to secure the largest share of nuts.

As a matter of fact, the nuts were fully ripe sometime before the hulls opened, but we did not know

it. In this matter the squirrels were wiser than the boys, and did not always wait for the nuts to fall of their own accord, but bit them off with their sharp teeth, hulls and all. In this fashion a squirrel would trim up a tree quickly and soon have all the nuts lying on the ground.

Whenever we entered the woods, while out on a nutting expedition, we always stopped and listened if we could hear any nuts dropping, that some squirrel was cutting down. If we heard the sound, we kept perfectly quiet, not to disturb the squirrel, which would quit its work if it heard a noise. We waited impatiently until the sound of dropping nuts ceased, when we ran to pick up the nuts before the squirrel could get them. It was the habit of the squirrel, after it had stripped a tree of its fruit, to run down and gather the nuts and bury them in a heap in the dry, rotten wood of a hollow log, or cache them in a pile of dead leaves where they had been drifted by the wind. The cache was so carefully concealed that its existence could not be detected by its outward appearance, and was not often found. After discovering the trick of the squirrel in caching the nuts, we made it our business to find them. In this manner we often found and carried

off triumphantly the harvest of nuts which some industrious squirrel had buried and stored for future use.

Sometimes the home supply of nuts became scarce, when we had to fare far afield to find any. Then, as a rule, we hied us away to the Mahoning River bottom, four miles distant, to visit the famous hickory swales of that region.

We usually left home before daylight, carrying our lunch in a bag, and headed for Carrick's pasture where there was a fine hickory grove. If we did not find enough nuts on the ground, we climbed small trees and shook them down, or bumped the larger trees with an improvised battering-ram, which brought them down in a shower. Each one of us gathered from a peck to a half bushel or more, and when we had all we could carry, started for home. We arrived there in the evening after dark, dog-tired and as hungry as bear cubs; but a good supper and a night's sound sleep fixed us all right by the next morning.

Our principal stock of nuts consisted of hickory nuts, but there were also smaller lots of chestnuts, walnuts, butternuts, beechnuts and hazelnuts. The nuts were spread in separate piles upon the floor of

the store-room to dry. After they were cured they were put into bags and boxes for safe-keeping until Christmas; but we couldn't wait and had to crack and eat a few nuts occasionally, just to see how good they tasted.

We got more real pleasure out of our winter store of nuts than from any of our other small possessions.

Of course, like all boys, we had to have a dog and so one was given to us by a friend. It was a mongrel black and white bull puppy by the name of Penny and not hurt with too much beauty. He was like Bud Means' bulldog, mentioned in The Hoosier Schoolmaster, "Whenever Bull takes holt Heaven and yarth can't make him let go." He was true grit and nothing ever daunted him. If he was somewhat slow in a foot race, because of his short legs, he was strong in courage and muscle, and couldn't be beaten in digging any varmint out of a hole in the ground, be it rabbit, skunk or badger.

The scent of a skunk fairly set him frantic, and whenever he located one he went after it like a whirlwind and never failed in landing the quarry; and often there were several animals in one hole. The embarrassing feature of skunk hunting was its powerful and disagreeable odor which filled the air

for miles around, so that our success was heralded at home before our arrival there. Of course, we were not welcome and were ordered to stay out of the house until conditions improved. None of us fancied the odor but we endured it for the sake of the money the hides brought us. Money did not grow on bushes in those days and a skunk's pelt was worth from one to two dollars, according to its size and quality.

There were also many muskrats living in nearby ponds and streams, whose hides were valuable as fur. These we caught in large numbers in home-made traps that answered the purpose admirably. The traps were made out of rough boards three feet long and six inches square. Each end was guarded by a metal gate that opened inward, and was divided into two parts by inserting several wooden rods through the middle. The trap was set, submerged in a runway where the rats swam back and forth during the night. They could go forward only by going through the trap, where they were caught and drowned. When we lifted the trap in the morning, we invariably found from one to four victims.

The summer harvest time was always an interesting season that called for much hard work. It was

before the days of the mowing machine and the reaper, when the grass was cut by hand with a scythe and the grain with a cradle. During war time the country was depleted of its active man power, when the young men volunteered to join the army, and the middle-aged men were busy with home and governmental duties.

The scarcity of men made it necessary for the boys to go into the harvest fields to do the absent men's work, where they soon developed into mature field hands. This was my job and I soon learned to cut a swath of grass or grain as well as any man. When the cutting began in a field, the reapers lined up in a row, one after the other, every man having to work at the same rate of speed in order to hold his place and not hinder the rest. If any work tried a boy's mettle, it was this experience. Sometimes the older men would tell us for our encouragement that they "would hang our hides on the fence before night," which naturally was disconcerting; but the plucky boy never acknowledged defeat and hung on doggedly, after a fashion, until quitting time.

A curious experience that often happened in the harvest field was fighting the bumble-bees which

sometimes stung the horses and likewise the men. As a valiant fighter, the lowly bumble-bee was not to be despised. Whenever a nest was found and disturbed, the bees at once flew out in a swarm to fight the common enemy in defense of their home. After experiencing some of their rough-and-tumble methods of fighting, we discovered an easy and effective means for their disposal.

An open jug, partly filled with water, was placed near the nest when the bees were routed out. Not finding an active enemy in sight, as we disappeared for the moment, but spying the open jug, they all made a bee-line for the hole and dived into it and the water below, and were drowned. We then robbed the nest of its honey and disposed of it at our leisure, without fear of being stung. There was no reason that we could see why the bees should commit deliberate suicide in this manner. Does anybody know?

Mowing grass, like chopping wood or doing other kinds of hard work, is difficult at the start, but by practice it gradually becomes an easy task, so that in time a long day of hard work, if done in a proper manner, never results in anything more serious than

a feeling of wholesome weariness. As exercise such work is more beneficial than playing golf or any other game.

After the harvest was gathered and the grain either stacked in the field or housed in the barn, came threshing time, which was another exciting event in the life of a country boy. When the threshing outfit drove in, there was something doing every minute. By the combined use of horse and man power the machinery was soon installed and started going. Each man took his station to perform his specific work, when the machinery began to hum. The sheaves of wheat or oats were cut and fed into the cylinder and as they disappeared the grain was separated automatically from the chaff and straw and discharged into bags.

The job of removing the chaff and straw from behind the separator usually fell to the boys in the outfit who were obliged to work in a thick cloud of dust that nearly smothered them. The dust from the straw seemed to be poisonous and breathing it made me sick. It acted like an attack of ague, causing severe chills and fever, which lasted several days.

How we boys did hate the job, yet we invariably had to do it.

Our school days were spent in the district or public school, where we were taught the elementary branches of study.

We went to school to learn and were not allowed to fool away our time. The primary subjects were thoroughly taught, which made a good foundation for the higher education of a college course or a business career that might come later. The school was made up of a variety of children of different dispositions and grades, the same as was usually found in any common school.

We also had our school bully, Clem Park, who in this instance was also the champion wrestler, runner, jumper and skater. It was his pleasure always to lord it over the small boy, which was naturally a humiliating experience to the victim.

The bully was a fast sprinter and it did not take him long to win in an ordinary race. He took after me one day, during recess when I was not expecting him, and I felt certain that he would catch and throw me. While I was running with all my might, and just as he was about to grab me, the thought suddenly popped into my mind how I could circumvent him. Instantly I dropped upon my hands and knees, directly across his path, which caused him to stumble

over me and sent him sprawling. The collision did not hurt me in the least, and before he could recover himself to continue the race I was up and out of his reach. After this occurrence he discreetly let me alone and never molested me again. Years afterwards I met him in San Jose, California, where he was a successful banker. I referred pleasantly to the circumstance but he did not seem to remember it.

My eldest sister Mary was the captain of our little band and our leader in everything we did. She was our little mother and, for some unaccountable reason, we all obeyed her without asking any questions. Her influence on my young life was deep and lasting and is a precious memory. Though dead, she is associated in thought with every incident of my boyhood, of praiseworthy things she said and did that were kind and helpful. Whenever any of us had trouble with our lessons she was always ready to come to our rescue and never refused to help us. A single example will illustrate what I mean. I had trouble with a sum in arithmetic and asked her to help me. She dropped her work, took the slate and sat down beside me and rapidly worked out the sum. When done, she turned and asked me if I understood

it. I awakened as from a dream and said, "What?" My mind was off on a rabbit chase and I had not heard one word she said. Instead of becoming angry and upbraiding me for my inattention, she patiently repeated the demonstration. This time I paid attention and understood what she said. It was her sweet, unselfish disposition that made us all love her so. In this manner she helped me in all the problems of my young life and was a daily inspiration to good thoughts and deeds. She undoubtedly exerted the same good influence on her husband as she changed him from a Democrat to a Republican, and caused him to quit using tobacco.

We were taught more by example than by precept and I do not recall that we were ever lectured and seldom given detailed instruction on any subject. Whenever there was anything for us to learn, we were given a practical lesson, which we were expected to follow. The general effect of our home life was such as to make me want to be worthy of the love and affection of my parents and of my brothers and sisters.

There was a small town library where I got books to read. One book particularly impressed me to the

sobbing point. It was entitled, "Homestead on the Hillside," and was written by Mrs. Holmes, the popular author of that day.

My interest was aroused in behalf of little Willie, the hero of the story, who was shamefully mistreated by a cruel step-mother.

I was interested in reading the lives of noted men and the history of our country. Books by Scott and Dickens were also favorites. But the books that were gripping and that I loved best were those which told about life in the early days, of hunting adventures and of Indian warfare. It was in the days when Beadle's dime novels flourished, and stories of the type written by Ned Buntline fascinated my youthful imagination. To me these characters represented real heroes and sounded true, even though they were only fiction of the Wild West variety, and gave me the desire to explore the western frontier.

Father's morning salutation indicated his kind and poetic nature. We children slept upstairs and father's customary morning call from the foot of the stairs was, "Auf! Kinder, auf! Die Sonne scheint über Hügel and Thal." (Up! children, up! The sun shines over hill and dale.) He had a suitable *Sprichwort* (saying or proverb) for every occasion.

His call usually brought us to our feet. If for any reason we were slow to respond, he repeated it with an added *ja* (Yah) to make it emphatic; and a heavy foot-fall on the stairs brought instant action. I cannot say why the heavy tread gave us fear, as I do not recall that he ever came upstairs to enforce the command. It may have been only a psychologic vagary, and we will have to let it go at that.

Father was a great reader and student of events. His favorite books were the Bible and the works of Goethe and Stilling. He often repeated to us the tales he read, and told us the story of Robinson Crusoe and his pet parrot. As a reward if I would learn to read German, he promised to buy me a copy of the book in English, which I acquired in due time.

He loved to walk and when he went anywhere, if there was a choice between riding and walking, he always chose the latter. He often walked to a little country church that was several miles distant and I sometimes went with him. I also walked with him on little excursions in the neighboring fields and forests, and they not only delighted me but always taught me something new.

After an absence of many years I visited the old home and the scenes of my childhood, and was sur-

prised to find the many changes that had taken place. The five and ten acre fields of the old farm, that once looked so large to childish eyes, had dwindled into small calf lots; and hills that once looked dangerous to climb had disappeared altogether.

The landscape was completely changed and the familiar faces of long ago, that I hoped to see again, had vanished either by removal or death; or, if found, the features were so altered that they were scarcely recognizable.

Army Days

THE MEMORABLE DAYS of the Civil War tried men's souls and made a lasting impression upon our nation's history.

The lines of divergence between the Republican and Democratic parties were sharply drawn, the former standing for loyalty and the Union and the latter for State Rights and Secession. Because of this radical difference in policies between the North and the South, the first Lincoln campaign for the presidency was hotly contested. Speeches were made, pro and con, by able speakers to influence the voters, that resulted in the election of Abraham Lincoln as President of the United States.

I heard my father tell how he was persuaded to vote the Democratic ticket when he first came to this country in 1830. After the Democrats passed the Fugitive Slave law, he repudiated the party and became a Republican, and ever after voted the Republican ticket. He said that he would not help to support any party that could enact such a cruel and inhuman law. It was a common saying during

the war that every rebel was a Democrat but not every Democrat a rebel.

Many political meetings were held which I, with a boy's curiosity, attended in order to hear and see what was going on. These meetings were sometimes held during the day in a nearby shady grove, but ofttimes they convened at night in the town hall or some other public place of meeting.

To make the occasion more impressive and as a preliminary to the meeting, men were formed into companies and dressed in uniform or regalia, and marched the streets by torchlight with flags and banners flying, to attract a crowd.

A brass band usually headed the procession, playing patriotic music, altogether making a spectacular and exciting scene.

As a result of such an active political campaign in every town and hamlet throughout the land, Abraham Lincoln was elected President, and in due time inaugurated as the Chief Magistrate of the United States. Immediately following that event, hostile acts against the Government commenced to develop and multiplied rapidly in the Southern States as they severally seceded from the Union. These acts of

disloyalty were promptly met and counteracted by loyal deeds enacted by the people of the North.

Calls were made for volunteers to defend the Union and suppress the rebellion, to which appeal ready response was made by the men of the loyal states and a formidable army was soon assembled. During the four years of the war recruiting for the army was a daily event and regiments were organized and sent to the front as fast as the men were needed.

With all of this excitement going on, the small boys of the village also caught the war fever and were eager to do something. The boys that were too young to enlist formed a company of home guards, as they chose to call themselves, of which organization I was elected captain. We had our regular times for meeting and drilling and were outfitted by our mothers and sisters with Zouave uniforms that made us feel very proud. We made wooden guns out of boards and spent much time practising the manual of arms. Our company usually managed to be present at all gatherings of soldiers and we were particularly active when any marching had to be done. This happened often, when we were permitted to escort squads of new recruits to their camp ground.

Military bands were in great demand in those days, to furnish music on public occasions and for the soldiers in camp. Their music always thrilled me and I gave the players close attention. I can even yet recall the name of Tump Haines as the leader of the Alliance band, although I had never met him. One particular composition was played that charmed me most and the melody haunted me for years, yet I never knew its name. Many years later, in looking over a book of songs, I saw stated in a foot-note that the song on that page had been a great favorite with military bands during the Civil War. As I hummed the tune I found that it was the same melody that had charmed me. The name of the song is "Bonny Eloise, the Belle of the Mohawk Vale."

During the month of July, 1863, the middle border got a taste of real war, when General John Morgan with his cavalry crossed the Ohio River from Kentucky and made a raid through southern Indiana and Ohio, as far east as the Pennsylvania line. The raid caused a big scare but did little actual damage. He was pursued by irregular troops and captured before he could re-cross the river. He was sent to prison, from which he later escaped. It taught the people

the necessity of being prepared for emergencies and the lesson was not lost.

This near-war incident occurring so close to my home, gave me the war fever worse than ever and made me unfit for doing any kind of work. The desire to go to war was constantly on my mind and I could not get rid of it. Father did everything that he could to dissuade me but it was no use. He related how, when he was a young man at home in Germany and Napoleon was in power, all of the able-bodied men of his village were conscripted into the army to go to Moscow, Russia, in that last fatal campaign when the city was burned and Napoleon's army perished almost to a man from cold and hunger.

My father was fortunate at that time in being afflicted with a bad case of white swelling of the knee, which disqualified him from going and saved his life. Stories of danger and hardship did not discourage me in the least and only seemed to add fuel to the fire. Being under age, I could not enlist without my father's consent, which he gave reluctantly after seeing that nothing else would do.

It made me the happiest boy alive but I was soon disillusioned by the experiences of army life.

In the summer of 1864, a friend of the family and a soldier in the army, Captain William A. Miller, returned home from the front on a veteran's furlough to recruit a company for a new regiment. It is said that "everything comes to him who waits," so at last I got my wish. Being a friend, he gave a sympathetic ear to my story and promised to have me enlisted even if I was under age. At that late period of the war, man-power for the army was growing scarce and the entrance examination was less rigid. It might truly have been said that both the cradle and the grave were being robbed to make recruits, and almost any man that offered himself was accepted.

A younger brother of the Captain, Vanamering Miller, also a member of our boy company and about my own age, enlisted at the same time and we at once became chums and mess-mates. The date of our enlistment was August 7, 1864, and the term of service was for one year or during the war. Soon after joining the company we received our uniforms and, dressed in our new suits of army blue, were sent to Camp Chase, near Columbus, Ohio, where

Joseph A. Munk, sixteen years old, in his first uniform after joining the Union Army.

we were regularly mustered into the service as Company I, 178th Regiment of Ohio Volunteer Infantry.

We were equipped with Springfield muzzle-loading rifles, which were the prevailing firearms of the army. The soldiers were required to keep their guns clean and in good condition, and were inspected on occasion to see that they met the requirements. Some of the men were careless with their guns and got into the habit of exchanging their own poorly kept weapons for good ones, which made it necessary that the owner adopt a private mark to guard against fraud. My mark was three pin heads sunk into the wood of the stock, that were not conspicuous but easily recognized. After the war, I took my gun home and I have it yet, in my library, as a relic of the war.

After a month of hard drilling in camp, our regiment was directed to report for duty to General George H. Thomas at Nashville, Tennessee, and we were assigned to the Second Brigade, Fourth Division, Twentieth Army Corps, Department of the Cumberland. Upon our arrival at Nashville, we were sent to occupy temporary quarters in the Zollicoffer House, a large building in process of construction but not yet finished. The building was a noted war rendezvous and clearing house for return-

ing furloughed veterans and new recruits going to the front. Here we camped and did guard duty for a few days, when we were ordered to go to Tullahoma to remain until needed for active field service.

Real camp life was a new experience and it took us some time to become fully accustomed to the change. The camp routine soon became monotonous, the same maneuvers being repeated day after day, with little variation. However, it gave us an opportunity to get acquainted and become familiar with our new surroundings. Very few of the boys escaped having a touch of homesickness, which always had a depressing effect. If a man got it bad, it was apt to cause some serious sickness that occasionally ended in death.

Men differ greatly in their ability to endure the hardships of army life. Young and medium-sized men made the best soldiers. There were three middle-aged men in our company who were related, two Snyder brothers and a cousin named Shinn, all six-footers and stalwart fellows. They were always complaining and sick and seldom fit for duty. One of the brothers died in a short time and the other one spent most of his time in the hospital. The cousin struggled along feebly in the ranks, doing

the best he could, but his efforts did not amount to much.

The opposite to these three large men were three medium-sized men, who made excellent soldiers. They were Corporal Joseph Hay and privates John Lambright and John Magee, who were rarely sick and had a smile and a kind word for everybody.

I remember them better than any other members of the company because of their cheerful dispositions, good manners and agreeable company. They all had good voices, sang well and gave frequent entertainments that helped to drive dull care away.

Corporal Hay had the largest repertoire of songs and was the best entertainer. He sang a funny ditty about women that always drew a crowd and an appreciative audience. It consisted of many verses, none of which I memorized at the time, when suddenly, after a lapse of thirty years or more, the tune and first two and last verses recurred to me again, as follows:

When I first saw my true love,
'Twas in rainy weather,
And the wrinkles on her forehead
Were thick as upper leather,
When I thought she wouldn't do,
And I knew she wouldn't do,
And I was almost sure she wouldn't do.

Her nose stuck out before
Like a neck on a fiddle,
And as thin around the waist
As a hogshead in the middle,
When I thought she wouldn't do,
And I knew she wouldn't do,
And I was almost sure she wouldn't do.

I'd give the preacher money,
If he'd be so mighty clever
As to take her to the devil
And keep her there forever,
When I thought she wouldn't do,
And I knew she wouldn't do,
And I was almost sure she wouldn't do.

Many were the happy hours that we spent around our camp fires in song, conversation and story telling, that turned our morbid thoughts into more cheerful channels.

Aside from performing the routine duty of policing the grounds, company drill and regimental dress parade, there was little else to do. Our chief duty when on detail was to patrol the Nashville and Chattanooga Railroad and guard its trains against attacks from marauding guerilla bands of rebels that infested the country.

After becoming settled in camp for an indefinite stay, we were supplied with a cook and company mess. When a meal was served we repaired to the

cook's tent, with tin cup and plate in hand, and received our portions hot from the hands of the cook. The usual menu consisted of coffee and crackers and boiled pork and beans. We seldom tasted baker's bread and occasionally were given a mess of potatoes or onions.

After we broke camp and started on a march, the company cook was dismissed and every man had to be his own cook. Each soldier carried his individual kit of frying pan, quart tin cup, canteen and haversack, and out of these simple receptacles, if they were not empty, he got his living. For a change the hardtack was sometimes fried crisp in hot bacon grease, or made soft by covering with water and steaming it. A sandwich made with slices of raw bacon between crackers tasted good as a lunch at noon time, when we were on a march.

Only a few times was liquor issued to the men. While standing in line, every man received his dram of whisky poured into his tin cup, which he could dispose of as he pleased. Some of the men drank their whisky raw and then looked for more, others made it into a toddy and sipped it at their leisure, and a few threw it away. As I had been taught temperance at home, I had no use for it and threw

it out. I was implored not to waste it so but to give it to someone that wanted it. I replied that if it was not good for me it would not be good for anybody, which ended the talk.

As a physician in after years, I learned that alcohol or whisky was a valuable medicine as a stimulant in a case of collapse. Like many other things in life, whisky is both good and bad, according to how it is used. It is capable of doing much harm but it can also do much good.

I do not recall that tobacco was ever distributed free in the army, although sometimes there occurred a serious shortage of the weed in camp. The lack of whisky or tobacco never bothered me as I had no taste for either, never having acquired the habit.

About the first of December, 1864, our regiment was ordered to report to General R. H. Milroy at Murfreesboro, where it took part in several engagements with Forest's cavalry and suffered some casualties. Just before the regiment broke camp at Tullahoma to go to Murfreesboro, I was taken severely ill with an attack of jaundice and a carbuncle on my knee. I had received a box of delicacies from home but was too sick to enjoy them. When I found that we had to move, I turned the box over to the

boys and told them to help themselves. Being too sick to march with the regiment, I was put on board a railroad train with other invalids and sent direct to the hospital at Nashville. My mind is a complete blank as to what transpired on the trip and I only remember that I found myself in the Columbia Hospital No. 9, under a doctor's care.

In the meantime great preparations were being made for the battle of Nashville, which was to have a decisive effect upon the military situation in the west.

After ten days of hospital experience, all of the convalescents and near-convalescents were ordered to pack up and get ready to take the field. We were organized into an invalid corps and sent to occupy some breastworks on the Granny White Pike, under the guns of Fort Negley, where we could see the battle and render aid, if necessary, in an emergency.

The weather was extremely stormy and cold, which in our enfeebled condition, was hard to endure. We were camped out in the open, without cover or shelter of any kind, and very little fuel to keep us warm and dry. One day the drizzling rain froze as it fell and covered the earth with a solid sheet of ice. There was no tent or bed to crawl into at night and we had

to lie down on the ice, just as we were, to go to sleep. As a result, we became frozen fast to the ground during the night and had to be pulled loose in the morning before we could get up.

After the battle the Invalid Corps was disbanded and the members sent to join their several commands. I found my regiment at Murfreesboro and was glad to be up and about again with my company.

General Hood was badly defeated and his army completely demoralized and scattered. Our corps with other units of Thomas' army went in pursuit, but had little fighting to do except to participate in some rear guard skirmishes and picking up stragglers. The weather was execrable and the roads even worse. We were in a constant struggle day and night with either rain and mud or snow and ice, that caused much discomfort and made our progress slow.

It seemed to us of the rank and file that we were often sent hither and yon on some wild goose chase that resulted only in additional hardship, without accomplishing anything good.

On one of these occasions our company marched all night through rain and mud, and when at last we were ordered to halt and fall into line, I was one of six privates out of one hundred that answered

present to the roll call. The absent men were either stuck in the mud and lost in the dark or so exhausted that they could go no farther and had to wait for daylight to catch up.

We were never told where we were going, nor the object of our mission, and went forward just because we were ordered to go. The most disturbing thing about the service to me was that the soldier was never a free man but was at all times subject to the commands of his officers and had to obey orders, or go to the guard house. As I was never in the guard house, I had no such grudge to nurse. Strict obedience to orders, of course, is an essential element of success in military training, as discipline must be maintained at all hazards. Nevertheless, such restraint was galling to the independent spirit of a free-born American citizen.

Our pursuit of Hood ended at Clifton on the Tennessee River. There we were met by an order that called for a reorganization of the army and the beginning of a new campaign. Our regiment was newly assigned to the Third Brigade, First Division, Twenty-third Army Corps, Department of the Ohio, commanded by General J. H. Schofield. Our corps commander was General J. D. Cox, and the division

commander was General T. H. Ruger. The Twenty-third Corps was ordered to move to the Atlantic Coast to join General Terry's forces in a campaign to capture and destroy Fort Fisher, a rebel stronghold at the mouth of the Cape Fear River.

We embarked on river transports at Clifton, January 14, 1865, and started on our long journey of fourteen hundred miles to Washington and Alexandria on the Potomac River. We ran down the Tennessee River and up the Ohio to Cincinnati, and from there went by rail to Washington, D. C.

For some unaccountable reason no rations were issued to the men on the boat, so we had only our empty haversacks for provender. I was glad to pick up and munch any stray bit of hardtack that I could find, tramped on by grimy feet on the deck, but that did not stay my hunger. Neither did we have berths to sleep in but every man took a chance to find a vacant spot where he could stand or lie down. My chum and I happened to spy an unoccupied corner on the deck near the smokestack, into which we crept and managed to keep warm during the night. The boat was heavily loaded and made slow progress going up stream, but we met with no serious accident

and in due time arrived at Cincinnati where conditions began to improve.

The weather continued cold and the landscape was covered by a thick mantle of snow, but the good citizens gave us a warm welcome and fed us all that we could eat. We entrained in box-cars and received the same enthusiastic welcome at every station where we stopped along the road. It seemed like getting home again, to receive such friendly greetings which were fully appreciated by the half-frozen and starved blue coats. We were home, indeed, in very fact, as many of the boys had enlisted from the same towns in southern Ohio through which we were passing. Some of them could not resist the temptation to visit the home folks and took French leave for that purpose. I, too, had the desire but resolutely smothered it and stuck to my little cold corner in the box-car.

We detrained at Washington, crossed the Potomac River on the old Long Bridge, and went into bivouac at Camp Stoneman on Arlington Heights which, since the war, has become a national cemetery for interring the Nation's honored dead. It was in mid January and the weather intensely cold. There was only a limited supply of green pine wood for fuel, that would

not burn nor keep us warm and gave out more smoke than heat. Fortunately, we now had plenty to eat and grew fat in spite of the cold. We pitched camp in the open with no other shelter than our little pup tents. Two of these small pieces of canvas were buttoned together and stretched over a ridge pole, which made a wedge-shaped tent the size of a dog kennel. We spread our thin blankets on the hard, frozen ground for a bed and used our knapsacks for pillows. We went to bed by crawling into our tent and blankets, one at a time, upon our hands and knees, and lay down with our clothes on. We spent most of the time in bed where we could keep warmer than when standing on our feet or walking about outside in the cold wind.

These little dog tents were always carried but never used on the march as then we lived entirely in the open and without any cover. Many of the soldiers discarded their knapsacks as being too heavy and cumbersome, and carried their blankets, tied in a roll, over the shoulder. I stuck to my knapsack as I found it a convenient receptacle for stowing away little things of value that would have been lost if carried in a blanket roll. Our constant concern was to make ourselves as comfortable as possible under

the existing circumstances. The pomp and glory of war rapidly frays into frazzles when the time has to be spent in a constant struggle for existence.

Soon the order came for us to leave our bleak, wind-swept land camp, and go by water to Fort Fisher, on the North Carolina coast. On February 4, 1865, we shipped on board the army transport Aerial for the trip. The weather was very stormy all the time that we were on the water. There was no danger of my ever wanting to sail the Seven Seas, after getting my fill sailing on this one. During the twenty days that we were on the water, the weather was exceedingly rough. The wind blew a regular hurricane, the waves ran mountain high, and the thunder and lightning were terrific. Tossed by wind and wave, the old boat rocked dangerously and threatened to shipwreck us any minute.

When we arrived at our destination, we were informed that the battle had already been fought and that Fort Fisher was captured. Without landing or casting anchor, the ship was turned about and headed for Moorhead City where we landed February twenty-fourth.

I was terribly seasick all the time that I was on the vessel and after landing I was land sick for a

week. I was completely cured of any desire to become a sailor and after recovering my equilibrium I was glad to be only a "land lubber."

From this port the Twenty-third Army Corps marched by land to Newberne, Kinston and Goldsboro, at which latter place we expected to meet Sherman, but we arrived first and did not see him until several days later. Our march towards Goldsboro was strongly opposed by General Bragg of the rebel army, who made an effort to stop us at Kinston. The entire corps took part in the desultory fighting that took place and lasted during several days. The fight is known as the battle of Kinston.

The coast country over which we traveled was low and flat and mostly covered by tangled woods and impassable swamps that obstructed the view and retarded our progress. It was tedious work picking our way over soft roads and through dense thickets of brush, expecting to meet the enemy at any time. The lowering sky and dark forests surrounding us filled us with gloom when we heard the faint boom of distant cannon and an occasional musket shot from the skirmish line. The feeling of fear and dread was more imaginary than real, and vanished, as if by magic, when the actual fighting began.

Early in the engagement Colonel Upham's regiment was surprised and captured by the enemy, and we were rushed in to fill the gap. In the open space where the conflict occurred I saw many dead men and horses lying upon the ground. Our losses in the battle were 1,257 men, of which number 322 were killed and wounded. General Bragg finding that he was being out-fought and out-generaled, decided that it was best to retreat, and moved his army in the direction of Goldsboro. We built a bridge over the Nuese River and marched into Kinston, March 14, 1865.

Again we found ourselves on short rations as the "Cracker Line" from Newberne was not yet in full operation, and we were once more made to feel the pangs of hunger.

This experience was repeated so often that it had become almost a habit. We were always on the watch to replenish our larder and must have met a streak of luck when, after crossing the Nuese River at Kinston, our mess found itself in the possession of an old turkey gobbler, which we cooked all night in a camp kettle and feasted on the next morning for breakfast.

While killing time and waiting for supplies, I wandered out into the woods one day to see if I could find something to eat. I chanced to run into a vidette picket-post among the trees, composed of a squad of cavalrymen and their horses. The horses were being fed corn in the ear on the bare ground and I saw kernels of corn going to waste in the dirt. I began picking up some of the shelled corn to take back to camp to parch, when the guard spoke and asked what I was doing. I told him my tale of woe and said I was in search of something to eat. He expressed regret at my hard luck and handed me a handful of crackers out of his sack, which I gladly accepted with thanks. I hurried back to camp to tell the good news and share the crackers with my comrades, which was soon done. It was barely a taste for each one but not enough to assuage our hunger, yet it was better than nothing.

It would scarcely seem possible in our land of plenty that soldiers should ever have to go hungry, but that was a common occurrence. Often when hungry and thinking of home, my mouth watered for a chance to pick out of the swill bucket, which stood at the kitchen door at home, fragments of food that had been discarded from the family board to feed to

the pigs. It would have been a feast. Although it was at a late time in the war, that region had seen little of any army and was, therefore, a rich, virgin field for foraging, which the boys were not slow to discover. Frequently parties went into the country on a foraging expedition that gave variety to our diet. The men came back loaded with hams and smoked meats, sweet potatoes and sorghum molasses, which they had found hidden away in out-of-the-way places, but these caches did not escape the sharp eyes of the Yankee soldier, and we lived on the fat of the land while it lasted. Some poultry and small livestock, such as sheep, calves and pigs, were also caught, killed and quartered and brought into camp. These likewise helped to replenish the larder.

We boys were a venturesome lot and were always ready to participate in any adventure that promised loot or excitement and never missed a chance that seemed reasonably safe. Not a few of the foragers were either killed or captured at various times, but that did not discourage the practice.

Graybacks were the torment of a soldier's life. The vermin were present everywhere but were more active in hot than in cold weather. While on the march, when the soldier was loaded and belted down

with his accoutrements, was the grayback's opportunity to get in its most deadly work. That was his busy day when the victim was hampered and helpless to defend himself. The soldier's hands were occupied with his load and there was no time to stop and scratch until a halt was called.

There was joy in the ranks when the regiment filed off the road to go into camp for the night. Soon after the command was given to halt and break ranks, the camp ground was covered with naked backs, as the soldiers stripped off their shirts to hunt the graybacks. Seated on his knapsack or blanket roll, every soldier was busy examining his shirt in search of lice. Their favorite resort was in or along the seams, and these were searched from end to end as the lice and nits were being caught and crushed, with a grinding sound, between the thumb nails. Such a clean-up of the little pests was only a temporary expedient and had to be repeated every day.

The greatest hardship in marching was the heavy load the soldier had to carry. It may not have been a heavy weight in pounds but felt like a ton on the shoulders of the soldier. He not only got leg weary, but was tired all over, and at times and in spots was paralyzed by gun and belt pressure. In his exhausted

condition he had to drag his miserable self along by the sheer force of will power, as his brain told him that he must do so at all hazards.

It was never a profitable business for the soldier to fall out of ranks to rest while his comrades marched on. If he ever tried it, he soon found out his mistake as it seemed impossible to catch up again. I did it once, to my sorrow, but never more. When I started to go forward again after resting, I found myself in the midst of such a tangle of road traffic that it was impossible to make any headway. In whatever direction I turned I always found something in the way to head me off and I had to stop and try another tack. I struggled on during two days, trying to catch up, but did not find my company again until the evening of the second day, after the regiment had halted for the night.

Schofield's army entered Goldsboro, March twenty-first, and Sherman arrived two days later. About the same time, the railroad was finished to Newberne and whole trainloads of supplies came rolling in to feed and refit the army. We were kept posted on the progress of Sherman's march through the heart of the Confederacy and were curious to see what kind of soldiers composed his army. I wanted to

see what "Sherman's Bummers" looked like and stood on the street and watched them as they marched by in irregular order. They were bound to show their hard service and came along dressed in rags but with the air of conquerors as they stepped off in an easy, swinging stride which denoted that they were accustomed to marching. They looked and acted like a crowd of big boys but real fighters, who were out for a good time and had it. Only a few middle-aged men could be seen among them, who must have acted as a balance wheel.

After ten days' rest and recuperation in camp, the combined armies started on their march after Johnston, in the direction of Raleigh, Greensboro and Charlotte. The weather being rather warm, much extra clothing was discarded and scattered along the road. This shedding of garments was premature and regretted after a few days when the weather turned colder and more clothing was needed. However, it was a windfall for the natives—negro contrabands and poor whites—who followed the army and gathered up and carted off wagonloads of clothing.

The army had got only fairly started on its march when the startling but glad news was received that

General Lee had surrendered his army to General Grant at Appomattox, April 9, 1865. The news was received with great joy and the soldiers screamed their delight and threw their caps in the air as they cheered wildly. It meant that the war was over and soon the soldier boys would be on their way home. But Johnston had yet to be reckoned with and our march towards Raleigh was resumed.

The army arrived at Raleigh on the thirteenth of April and negotiations for Johnston's surrender were begun. On the fifteenth the shocking news of President Lincoln's assassination was received, which seemed too awful to be true. When the report was confirmed and the soldiers fully realized the full meaning of the terrible tragedy, they were filled with such a frenzy of rage and fury that they threatened to go after Johnston and wipe him and his army out at once. Under the circumstances that, of course, could not be done as events had to wait and take their turn in their natural course.

After General Johnston's surrender the bulk of Sherman's army was concentrated at Raleigh for a general review, which was an inspiring sight; the army then started north on its march to Washington for the

Grand Review, said to have been the greatest military pageant in history.

The Twenty-third Corps was retained for a time to do local guard duty and take care of any emergency that might arise. The forces were distributed among the towns of Raleigh, Greensboro, Salisbury and Charlotte.

Using Charlotte as our base of operations, we went out into the country in squads of from five to ten men under a noncommissioned officer, searching for medical and hospital stores that had been stolen and concealed. These goods were cached in a variety of places, such as old buildings, cellars, under floors, in barns or any place that promised concealment.

We found quantities of such material, which included many kinds of liquors, that were brought in and turned over to the Government. On one of our successful raids our leader suggested that we celebrate the day by opening a bottle of wine, which was agreed to. Nearly all partook of it but my conscientious scruples would not permit me to indulge. I wonder if I would do as well now? I believe in children being taught religion and high ideals of living to start right in life, as there will always be

plenty of opportunities to broaden out later in life if it be so desired.

We were stationed for a time to guard a pontoon bridge over the Catawba River, to observe and regulate the traffic. Many of the paroled ex-rebel soldiers chose this route on their way home after the surrender and gave us a chance to meet and converse with them. Those that needed help we gladly assisted, whether they were sick, wounded or hungry, and they certainly appreciated our kindness. Ever since then I have had a great respect for rebel soldiers, even though once we were foes.

Knowing that the war was over, we were anxious to quit camp life and return to our homes. Rumors were heard daily as to when we would start for home, but these did not materialize. Finally, however, the order came for our release and we were mustered out of service June 29, 1865, at Charlotte, North Carolina.

After getting started, we could scarcely realize that we were actually on our way home, as it all seemed like a dream. There was nothing more that we could do than to settle down in the cars and take things easy while we fed ourselves upon the pleasures that we knew were waiting for us when we should

get home. If the cars made a stop, we got impatient and were happy only when they were in motion and going in the direction of home. We made no change in our apparel and appearance and traveled just the same as if we were on the march. In due time we arrived at Columbus, Ohio, when we received our discharge papers at Todd's Barracks, and every man struck out for himself and made a bee-line for home.

Many soldiers were returning from the war at that time and when I stepped off at the station at Alliance I found others there who were also headed for the same goal. I marched out a mile and a half on the public road in my army togs and found it to be the easiest march of the war. I felt as light as a feather and my feet were stepping on air.

Before reaching the gate, I caught sight of my sister Mary, who was expecting me, and it did not take us long to meet and embrace. All the family received me with open arms and were as glad to see me as I was glad to see them, and they could not do enough for me. Everything about the old homestead seemed to be about right. The friends were kind, the food tasted good, the bed was soft as eiderdown and I had every comfort that heart could wish. I was contented and happy. I was just crazy

to get into the army and then was doubly glad to be out of it again; such are the vicissitudes of life.

I am thankful that I was not made a prisoner and sent to Andersonville which was the worst fate that could befall a Union soldier. I am also thankful that I did not have to serve in the army at a time when the soldiers were compelled, as is now the custom, to have their bodies shot full of poison serums by the doctors for some imaginary benefit, which I believe killed more men in our camps at home during the World War than were killed by the enemies' bullets on foreign battlefields; and it makes me shudder with fear and shame whenever I think of it.

Vocation and Avocation

AFTER THE GLAMOUR of getting home from the war had worn off, I began to think about going to work. I realized that my life had undergone a great change and that I had to readjust myself to the new order of things. My army experience was a stepping-stone from boyhood to manhood, after which my childhood was merely a memory.

When the Civil War closed there was much talk about how the army had spoiled the young manhood of the nation for work and had unfitted the young men who went to war for the duties of civil life, which statement I resented. I considered that I had been benefitted by my army experience as it was the means of getting me out of myself and giving me a broader vision of life. I wanted to do something to prove the falsity of the assertion and show that I was not a failure. I could not remain idle and had to get busy.

I decided that I must continue my school studies for a time at least, but was also desirous of engaging

in some lucrative employment that would produce immediately an income in dollars and cents. I matriculated as a freshman in Mount Union College for the fall and winter term of 1865-6, and waited on future developments. The college was young but filled an urgent local demand, and the results fully justified its existence by the quality of its graduates, some of them reaching national prominence in after years.

A half century ago our colleges were small affairs compared with what they are at the present time. Instead of the faculties counting their professors by the hundreds, as in the case of some of our large institutions of learning, which have grown to be top-heavy and unwieldy, in the old days the faculties scarcely averaged a dozen members. Instead of a professor giving only one or two lectures a month, every instructor taught a class at a fixed hour every day. This close intimacy between pupil and teacher kept the subject taught fresh in mind and made its study attractive. Every scholar was in personal touch with his teacher, which was of vast benefit to the student. The student went to college to learn something useful and not to fritter his time away in foolish folderols.

The college supported two literary societies, Linnean and Republican, which met every Friday night at the same hour in two adjoining halls on the top floor of the college building. The membership of the societies was wholly volunteer. Although there was no compulsion used, every student was expected to join one of the two societies.

A friendly rivalry existed between the two organizations in an effort to see which one could secure the most students and give the best performance. Fortunately, the two bodies were about equally divided as to number and interest, and the competition for supremacy was free of all hate or bitterness.

The exercises consisted of music, declamation and debate, and occasionally some drama was staged so that the program was educational in character. These gatherings were not only helpful to the students but were likewise beneficial to the youths of the town, as the public was invited to attend the meetings.

Early in life I got the idea that a man could never tell what he could do until he tried, and have always acted on that principle. If a subject was presented which seemed to be interesting, I gave it attention and inquired into its merits. If I found it to be

desirable and useful, I gave it some study, but if it was found to be valueless the subject was dropped.

In addition to my regular studies in college, I became interested in two side lines that attracted my attention. One of these subjects was taxidermy and the other was music. Professor G. W. Clark, of the faculty, was a practical taxidermist and willingly gave me lessons in the art out of school hours. I soon became quite skillful in mounting birds and small mammals, and acquired not a few specimens as house ornaments. I did not engage in the work extensively, as I did not intend to follow it as a business.

I always loved music and was ever ready to join in singing the home and school songs. Singing music by note was quite a different affair from singing by ear, as I found out before I was able to read music at sight. To accomplish this feat, in addition to getting my other lessons, was a task. I was lucky in finding a senior student, Joel Seymour by name, who became interested in my plan and promised to see me through. I engaged him to give me a course of private lessons which he said would enable me to read music out of a book. Our united efforts were

successful in giving me a start in music. From that time on I worked my way along in music as I found opportunity and time to devote to the subject. I had not yet chosen my vocation and had adopted these two avocations merely because they interested me and gave me pleasure.

About that time I received the suggestion to study medicine. After carefully considering the subject, I concluded to do so and became a student of medicine in the office of a family friend, Dr. D. H. Rosenberg, who lived in the village of Bettsville, in western Ohio. I read medicine three years, attended two courses of medical lectures in the Eclectic Medical Institute of Cincinnati, Ohio, and graduated in February, 1869.

The same method of teaching was followed in the medical school as was pursued in the literary college; short terms, few but able teachers and plenty of hard work that kept the students busy night and day.

After receiving my diploma, I sought a location to practise my profession and was willing to begin in a small way and work up. On the advice of my preceptor, I selected the town of Lindsey, Ohio, on

the Lakeshore Railroad, where I rented an office and hung out my shingle for business. I was reasonably successful for a beginner, but not satisfied. After staying a year, I got the western fever and had to move on. Having friends in Chillicothe, Missouri, I paid them a visit in 1871. On my favorable impression of the town and my friends' urgent request, I decided to stop and try my luck, as the saying is. I rented an office on the public square and was soon settled and ready for business.

About the time of my arrival, there was an influx of eastern homeseekers to help settle up the country, which increase in population gave balance to the public sentiment as to the merits of the North and South during the war. The southern element rather resented the intrusion but started no open hostilities. The people were good enough but there was an aloofness in their manner towards the Yankee immigrants that did not court acquaintance and made the strangers feel as if they were not welcome.

I read and studied a great deal and acquired the writing habit. I contributed articles on medicine to several periodicals, the Eclectic Medical Journal of Cincinnati, American Medical Journal of St.

Louis, and the California Medical Journal of San Francisco; and furnished articles on health subjects to the local papers.

I was not long in reaching the conclusion that a doctor ought to get married and I decided to commit matrimony. The young lady involved, Miss Emma S. Beazell, also had been a student of Mount Union College, where we became acquainted. Both of us being of one mind, that there was no good reason for delaying the ceremony, we agreed to marry. I then journeyed east and the marriage ceremony was performed at the home of the bride, in Webster, Pennsylvania, January 9, 1873.

I gave most of my leisure time to music and the church. To increase my usefulness, I took lessons from a teacher on the cabinet organ and after some time was appointed organist and choir leader of the Methodist Church. I organized a music class from the children of the Sunday School and taught them to read music. There was considerable musical talent available in the town, which was united in a Choral Society, conducted by Dr. M. H. Wilcox, a local dentist. The attendance and interest of the members at the meetings was gratifying, and concerts were given occasionally at the city hall. Professor

Dr. Munk, at the age of twenty-five, while living in Chilicothe, Mo., during the Seventies.

H. S. Perkins of Chicago visited the town annually for a number of years and held conventions with local talent that rendered some rather ambitious music.

My children's music class also gave concerts occasionally, in which everyone was interested and everybody attended, as was the custom in such affairs. One occasion, particularly, I remember, when the class gave a cantata that contained a fairy dance for which I wrote new words and music that made a great hit. It was charmingly rendered by a group of little children and received hearty applause. The following lines contain the words:

> Down in the leafy, rocky dell,
> There the fairies love to dwell;
> Where the leaves in the sunlight glance,
> There the fairies love to dance.

Having so much music on my mind, seemed to inspire me to write music. In making the attempt, I succeeded even better than I had expected. A number of songs were published in sheet form by John Church & Co. of Cincinnati; and hymns, anthems and choruses appeared in choir and convention books, edited by Professor Perkins and published by the Oliver Ditson Company, Boston, and Wm. A. Pond

& Co., New York. Several temperance and Sunday School books also contained some of my songs that were popular. All of this music was written during the seventies, while I lived in Chillicothe. After I moved to Topeka, Kansas, I was too busy in my profession to give much thought to music and I quit writing any more.

In the summer of 1876, I made a trip east, to attend the annual meeting of the National Eclectic Medical Association, of which I was a member, and to visit the Centennial celebration. The medical meeting was held in Washington and the Centennial Exposition at Philadelphia. Both events were intensely interesting but the weather was too hot and oppressive for comfort. It was while General U. S. Grant was President and he gave the doctors attending the convention a reception at the Capitol. It pleased me mightily to meet and shake hands again with my former commander-in-chief. At this meeting I was elected vice-president of the association.

The torrid weather made me feel half sick, and I was in poor condition to enjoy the show when I arrived at Philadelphia by boat. There was no way of escaping the heat, and suffering humanity had to sweat and swelter. It was in the month of June

when the sad news was received of the awful massacre by the Sioux Indians of General Custer's command in a battle on the Little Big Horn River in Montana. The hot weather, the depressing news of the Indian butchery, and my sickness, decided me not to tarry long and I soon started for the west.

Occasionally my wife and I joined a picnic party of friends and drove out into the country for the day, either to Dayton Lake or Gillespie's Ford on Grand River, where wild flowers and ferns grew in abundance among the rocks. Those were enjoyable days that are remembered yet with much pleasure.

One picnic, which I always took alone, was when I went hickory nutting. On the Grand River bottom grew extensive groves of hickory trees of the shell-bark variety, that have nuts of mammoth size and fine flavor. To buy them in town was no fun at all, and the real joy of having them was found in the getting of them. When the time came to go, I borrowed my neighbor Billy Miller's plug horse and rode out to the hickory grove. I crossed the river on an old-fashioned wooden bridge at Graham's Mill and then turned south into the big forest. I preferred going on horseback for the change and the freedom that it gave me. It was more for the joy of getting

into the woods than for the nuts that were gathered. The nuts were put into a two bushel bag and fastened to the cantle of the saddle, when I mounted and rode leisurely home.

I frequently took long drives into the country, which were enjoyable in pleasant weather but were trying when the weather was stormy and bad. To have to wade through snow in zero weather was anything but pleasant, when I had thoughts of seeking some milder clime.

After waiting ten years for the promised prosperity that did not arrive, I made up my mind to make a change and hunt a new location. I heard of a physician's partnership business for sale in Topeka, Kansas, and went over to see about it. I was favorably impressed with the offer but considered the price rather high. It seemed like a big undertaking but, nevertheless, I accepted it, as it was a question of either "make or break." The transaction was a good move and was just what I needed to put me on my feet. This change was made in the spring of 1881.

The difference in the two communities was marked. From the southern, pessimistic, old fogy notions of old Chillicothe, to the northern, optimistic

enterprising new Topeka, was a long step. The change gave me a feeling of freedom that I craved, and opened the door of opportunity that I had sought.

My partner's name was Phineas I. Mulvane and the firm name was Mulvane & Munk. My partner proved to be one of the best men that I ever knew. We were equal partners and shared alike in all things, each partner having the privilege of taking a vacation sometime during the year. This arrangement was fortunate for me as it gave me the chance to visit portions of the West that I desired to see. We were partners for eleven years and during all that time I do not recall that we ever had one word of difference.

My partner was a large, handsome looking man, a few years older than myself, with a charming personality, and he was very popular. One peculiarity that both amused and pleased me was his manner of greeting his patients. I was usually first at the office in the morning, after making a round of professional calls, where there would be one or more patients waiting to see him. As he entered the room in his jovial manner, he greeted the patient with a hearty handshake, saying, "Howdy do! Howdy do! Are you healthy?" The patient invariably answered,

"No, Doctor, I am not feeling very well"; to which the Doctor immediately replied, "Well, I can fix you," when the cure was already half made. This was his customary greeting every day in the year and he meant it, too. He had a large practice and was very successful in curing the sick.

My one diversion here, as in Chillicothe, was music but after a different fashion. I stopped writing and teaching altogether, but I joined the Modoc Club, an organization of men that was limited to thirty members. It met for rehearsal once a week and sang for the public on many occasions.

The club was started as a minstrel troupe in 1876, to help defray the expenses of the State of Kansas exhibit at the Centennial Fair in Philadelphia. It was so successful in its work that it was reorganized on a permanent basis, when a name had to be chosen. It was at the time when the Modoc Indian outbreak occurred and the convicted culprits of that outrage were being incarcerated in the penitentiary at Leavenworth. Everybody knew the name Modoc and it was suggested as a suitable name for the club, which was then adopted.

Major T. J. Anderson (Our Tom), son of a Kansas pioneer and Civil War veteran, was elected president,

in which capacity he served during his lifetime. He was the life of the club and all of its members loved him. He held an important position on the Atchison, Topeka and Santa Fe Railroad and was acquainted with many influential men, some of whom became our friends and patrons.

M. C. Holman was our director, and no better man could have been found to fill the place. He was a real musician and fully qualified to take command. He was affable and kind and had the full confidence of all the men. It was as important for him to be the leader as it was for Major Anderson to be the president. The combined qualities of the two men made a team that was invincible.

Topeka being the capital city of the state and seat of the general offices of the Atchison, Topeka and Santa Fe Railroad, it was a town of some importance and the scene of many stirring events.

At nearly every important public meeting the club was asked to sing, which it gladly did whenever it was possible. At political and legislative functions, teachers' conventions and Grand Army rallies, its presence seemed indispensable. Its chief aim was to please and entertain the crowd and its selections included every kind of music. That the club's efforts

were appreciated was evidenced by its popularity and the enthusiastic applause and encores that were bestowed.

The club also gave pay entertainments in the opera house, to help defray its current expenses. With the assistance of its lady friends, it staged at various times Gilbert and Sullivan's and other light operas, such as Pinafore, Pirates of Penzance, Mikado, Chimes of Normandy, etc., which performances were always largely attended.

Two of its members, A. M. Salyer and J. N. Goolman, composed a new opera, words and music, called Eileen, that was the equal of any of the operas presented and was repeated many times to crowded houses. Two other members, L. M. Wood and W. W. Woolverton, also composed meritorious songs and choruses, which were included in the repertoire of the club and became popular.

Through the influence of Major Anderson, who was a Grand Army man, the club received invitations to sing at the meetings of the National Encampment of the Grand Army of the Republic for many years. These meetings were held in all of the large cities, both east and west, which afforded the club the opportunity to travel from the Atlantic to the Pacific

and delight vast audiences with their patriotic songs. The banner trip of this series of excursions was the one made to San Francisco in 1886. A private car was chartered for the trip, over the Santa Fe route, and eighteen members of the club composed the party.

On the way to the coast the train stopped early one morning at Barstow, on the desert. Everybody was invited out for refreshments and the hungry crowd of tourists was quick to respond. Not knowing what to expect, it was a great surprise to find carloads of fruit and wine being distributed free as a friendly greeting from the hospitable citizens of Los Angeles. This generous treatment impressed the visitors more than any other demonstration could have done, and won our hearts entirely.

When we reached Los Angeles, we met a continuous round of free entertainments and were wined and dined to the limit. After several days of festivities, we entrained for San Francisco where the same generous reception was accorded us, and all that we lacked was the capacity to absorb it all.

The club sang before many brilliant audiences, but the most thrilling occasion was when we sang in the rotunda of the Palace Hotel, where every seat and

every foot of floor space was occupied and the seven galleries, clear up to the roof, were packed with an enthusiastic audience that applauded and cheered to the echo. The acoustics of the rotunda were perfect for singing and the club never sang better.

On our return trip we went back over the same route that we came and stopped again at Los Angeles. We also visited the neighboring towns of San Bernardino, Riverside and San Diego, and were hospitably received everywhere. Our car was continually supplied with crates of fresh fruits, and wine was passed around by the bucketful. The California style of greeting strangers was new to us, but immensely popular. We thought that Kansas knew how to entertain but had to acknowledge that California could beat her. The club gave a concert in each of these towns to full houses, and we went home with more money in our pockets than we had when we started on our journey.

I was not an hour in Los Angeles before I said to myself, "There is one more move for you to make, old man," and I then and there resolved to make the Angel City my future home. It was the first time in my experience that I felt like choosing a permanent residence. I had made several changes of location

and each one was better than the last, but going to Los Angeles was the best move of all, and I have never regretted the choice.

My partner had speculated successfully in Chicago real estate and had thereby acquired considerable property, which decided him to leave Topeka and move to Chicago. The change was made in 1890.

During that summer I went to Boston with the Modoc Club, and the following summer I spent on the ranch in Arizona. As my partner had already gone to Chicago and I contemplated leaving Topeka soon, I made my arrangements to go without further delay. By the spring of 1892 I was ready to leave Topeka and we made the trip to Los Angeles, stopping at the ranch on the way out, where we have lived ever since and expect to spend the balance of our days.

My partner, too, had a fancy for Los Angeles but his Chicago interests led him in the opposite direction. The change did not agree with him and, although he was yet in the prime of life, it was not long until he sickened and died.

After taking my first trip to Arizona in 1884, and then to California in 1886, I became restless and dissatisfied and had to repeat the journey every year,

just to satisfy myself that everything I had seen was still there. If I had been a single man, I doubtless would have made Arizona my home, as did my two brothers who were unmarried. In those early days of danger on the frontier, it was foolhardy for a man to take his family into that Apache infested country to live, particularly if the wife was a semi-invalid, timid and nervous. When I did make a choice, I selected California as the best suited to the comforts of a family at that time.

The first member of our family that went to Arizona was a cousin, named Aaron Evans, who was an Ohio coal miner and served in the Union army during the Civil War. After the war was over he wanted to dig gold instead of coal and went first to Colorado. Not finding a gold mine there, he drifted down to Arizona and located in the Dos Cabezas Mountains where he built a rock cabin and went prospecting among the hills for the precious metals. He found signs of gold in Silver Creek and Gold Gulch and obtained some gold by placering. He also found a piece of rich gold float, but could not locate its source or the lode from which it came.

He sank a shaft in East Canyon, which he called the Mary Mine; and dug another hole on the ridge

above the cabin that he named the Bell W. A dribble of gold showed in both prospects but not enough to justify further development. He would not quit searching for gold, and again verified the saying, "Once a prospector, always a prospector." Having entered the game, he could not give it up.

He wrote to my younger brothers, who were practising attorneys in St. Louis, in 1882, that he had found a valuable gold mine and wanted them to come out and join him. My youngest brother, William, thought it might pay and was willing to take a chance, and forthwith went out. My other brother soon followed and as I also was asked to come, I, too, went in the spring of 1884, on a visit and vacation trip. The gold mine failed to pan out and my brothers, instead of going into mining, started a cattle ranch. In this enterprise I joined them as a partner, when the Munk Brothers' Cattle Ranch was organized and is yet functioning.

My brother "Bill" was a good scout and had previously located other valuable properties, but did not have the patience to wait until they could be developed and made profitable. Soon he would get restless with the wanderlust and go off on the hunt for something new and better. He stayed with the

ranch seven years before he decided to quit. The ranch did not have the money to buy his interest, but when it was definitely decided that he would go, he accepted the proposition to ship a trainload of steers which he rounded up and took away as his share of the business and sold on the Chicago market. After thirty years of wandering, we three brothers were again reunited in Los Angeles, when we resolved to stick together for life.

My brother Edward and I have always been closely associated in business and worked together for our mutual interests. He and Bill together managed the ranch in the beginning but after Bill left, Edward took entire charge of the business, my relation then being only in an advisory capacity.

Edward's fancy ran to politics and he was elected County Judge and held court in Tombstone, the county seat of Cochise County, Arizona, during two terms of four years, from 1886 to 1890. By virtue of his office he was also Superintendent of Public Instruction. He organized the school system of Cochise County and called the first county teacher's institute that was held in the state. After his term of Judgeship expired, and during the Cleveland administration, he was appointed Receiver of the

Dr. Munk, at the age of forty, when a citizen of Topeka, Kan., during the Eighties.

United States Land Office at Tucson and was also made a regent of the University of the State of Arizona.

Although I went to Los Angeles as a stranger, I soon established a good business, and often wondered where all of the business came from. Many families had moved from Topeka to Los Angeles and among them some of my former patrons. The new comers were naturally glad to meet and fraternize with old friends and to make new acquaintances, and, incidentally, spoke a good word for me.

Being nearly worn out with work when I arrived and giving myself no rest, I suddenly collapsed with a critical illness that confined me to my bed for three months. I expected to die and my physicians held out little hope for my recovery, but fate willed it otherwise and I got well again. I have had several severe injuries and sicknesses in my time but have not mentioned them as such things are liable to happen to anyone and are of no general interest.

The California Eclectic Medical College of San Francisco, after a successful career of thirty years, was destroyed by earthquake and fire in 1906, when it was announced that it would not be rebuilt. The friends of the college, however, did not feel like

letting it go out of existence altogether, and proposed that it be moved and reopened in Los Angeles. Its charter and good will were transferred to the new management and new officers and a new faculty was elected. Dr. O. C. Welbourn was elected president and I was chosen dean. A suitable building was leased for the use of the college at 846 Lyon Street, and the school opened its doors for its first term in October, 1907.

In 1909 the college was moved into new and better quarters at 337 South Hill Street, with an increased attendance. Unfortunately the school was handicapped by a lack of funds and strangled from the start by a code of arbitrary and unreasonable regulations that were promulgated by a self-appointed and mercenary board of censors in Chicago, which was organized for the express purpose of suppressing all small medical colleges and putting them out of business. The school did good work while it lasted, but the obstacles imposed in its way were insuperable and the institution, although solvent, voluntarily suspended its sessions and closed its doors, July 1, 1915.

At a meeting in Boston in June, 1910, I was elected president of the National Eclectic Medical

Association, and presided at the next annual meeting of the association in Louisville, Kentucky, in 1911.

In 1900 I joined the Archaeological Institute of America and became an organizer of the Southwest Museum. In 1908 I donated my Arizona Library to the Museum, which was housed temporarily in leased quarters in the Hamburger Building. A bookplate was ordered for the library, illustrating the beginning of knowledge by primitive man in the Southwest, and this collection of books was officially designated as The Munk Library of Arizoniana.

I also donated a case of geological and mineral specimens of unusual interest and value, which I picked up on my various travels in Arizona.

In 1914 a new Museum building was completed and occupied, when the Library was moved into a room of the Caracol Tower. The room is thirty feet square and eighteen feet high, with a gallery surrounding it, which accommodates comfortably the Library of about 15,000 volumes. In that year also a third edition of the Arizona Bibliography was compiled and published for the Museum by the Curator, Dr. Hector Alliot, since which time a card catalogue has been in the process of making.

While engaged in compiling this work, Dr. Alliot found some old copies of my music, the existence of which I had almost forgotten. He suggested that all of my music that could be found should be gathered and re-published in book form. This book appeared under the title of "Musical Compositions," in 1916.

I was a member of the Los Angeles Whist Club for a number of years, which was my only relaxation and recreation. The membership was composed of about thirty-two men and women, the number fluctuating slightly from time to time as new members joined the club and old members dropped out. Whist was the only game played, which was always duplicate and sometimes progressive. The club flourished for many years but finally disbanded after bridge whist came into vogue.

I took a lively interest for many years in a local periodical, the California Eclectic Medical Journal, edited and published by Dr. O. C. Welbourn, to which I was a frequent contributor. I never attempted to break into any of the popular magazines as I neither had the time nor inclination to do so, and did not care for publicity. The above Journal, together with other representative periodicals of the

Eclectic school of medicine, which system I practised, afforded me all the opportunity that I needed to express my views in print.

I never was a "Jiner" and do not belong to any secret society or social club. Such organizations are popular and must do much good, but somehow they never appealed to me as being desirable, and only seemed to be a waste of valuable time and effort. I cannot have inherited the gregarious instinct as I am not enamored of crowds but, on the contrary, try to avoid them as much as possible.

On my first visit to Arizona in 1884, I was greatly impressed by what I saw of the climate and scenery, strange fauna and flora, and the many bright colors seen in the earth, air and sky. The soft air, filled with the sweet fragrance of desert perfumes, also added much to the joy of living.

During the past forty years I have made one or more trips into Arizona every year, to enjoy its charm and beauty, and to roam over its wide open spaces in search of the marvelous and curious in nature. My first trips were devoted mostly to the ranch and the interesting objects in its near vicinity, and getting acquainted with the country. After the year 1900, I began making trips into northern Arizona, where

the landscape is incomparable for isolation, wild beauty and new world wonders.

The Grand Canyon of Arizona, of course, stands first in the list, as it has no equal anywhere upon the face of the earth. Thousands of pilgrims go to see it every year and worship at its shrine. I have seen it many times and expect to see it again. The oftener one sees it, the more one enjoys it by becoming better acquainted with its magnitude, majesty and beauty. It has never been adequately described and, indeed, never can be. Even beholding it is beyond the comprehension and power of puny man to understand.

The adjoining region of Flagstaff is of exceptional interest. There is the great Coconino Forest of pine trees and seven distinct life zones within a radius of twenty-five miles; the towering peaks of the San Francisco Mountains that are 13,000 feet high, and three hundred extinct volcanoes, lava beds and cinder fields; two natural ice caves in pure lava, with their mystery yet unsolved; Sunset Mountain, with its immense crater and crown of never fading glory of sunset glow that is produced by a combination of bright colors in its volcanic rocks; Walnut Canyon

BOTTOM OF THE BRIGHT ANGEL TRAIL, GRAND CANYON OF ARIZONA
Suggestive of Dante's Inferno

and its cave and cliff dwellings and bottomless pits; and the Lowell Astronomical Observatory, which was established by Percival Lowell in 1893 for the study of the planet Mars, upon which signs of life have been discovered. These are some of its most interesting features.

Its near neighbors on the east are Canyon Diablo, and an earthquake fissure that was made in 1887; also the Meteorite Mountain, where a small star fell out of space and hit the earth ages ago. The terrific impact raised a mound two hundred feet high above the level of the surrounding plain, and made a hole in the ground that is six hundred feet deep and a mile wide, where, presumably, the asteroid lies buried and is now being resurrected by a company of scientists. Great masses of meteoric iron, which is said to consist of the best gun metal and containing real diamonds, have been carted away. Large quantities of magnetite, or dead sparks from the burning meteor, which are magnetic and have polarity, also have been found in the vicinity.

Farther east are the Petrified Forests, where the trunks of big trees have been turned into stone and lie scattered in profusion over the ground. When

the logs are broken open, they show the grain of the wood in all colors of the rainbow, and contain a variety of precious stones and gem crystals.

Beyond these forests of stone are other forests of live trees upon the Mogollon Mesa and White Mountains, that extend into New Mexico. These forests are a paradise in summer and are filled with bird life and floral beauty. Meandering through the forests and mountain meadows, ripple streams of clear, cold water that are full of speckled trout. It is an unusually attractive spot and has been the ancestral home of the Apache Indians from time immemorial. In the midst of these mountains lies the Tonto Basin, an immense natural depression in the earth that is surrounded by a high cliff of rim rock which makes the place impregnable and almost inaccessible.

In northeastern Arizona, between the Santa Fe Railroad and the Utah border, is the home of the Navajo Indians, the largest of all the Indian tribes. A place where the corner of each of the four states, Arizona, New Mexico, Colorado and Utah, touch each other at right angles, is called the Four Corners and is the only occurrence of the kind in the United States.

Upon the Navajo Reservation are found two of the three known large groups of cliff dwellings. Two of these groups are found in Canyon de Chelly and Laguna (Sagi) Canyon in Arizona, and the third group is on the Mesa Verde in Colorado. Scattered all over Arizona and the Southwest, are seen traces of an ancient people, which archaeologists are investigating and trying to unravel their history.

Travelers who go into that country usually go by the way of Gallup. In only a few places of the Navajo country are white persons permitted to live. These are the Franciscan Fathers at Saint Michaels, Lorenzo Hubbell at Ganado and John Wetherill at Kayenta. The Hopi Indians live on a small reservation in the midst of the Navajo reservation. They are successful farmers and practise many weird ceremonies. They live in eight villages on three high mesas and are a thrifty people.

Arizona has many tribes of Indians that now live in peace, which are as follows: Navajo, Apache, Hopi, Pima, Papago, Yuma, Mohave, Hualapai and Havasupai, the latter living in Cataract Canyon.

Highly colored cliffs of many hues, and domes and pinnacles of black rock are numerous, standing either singly or in groups. The most notable of these

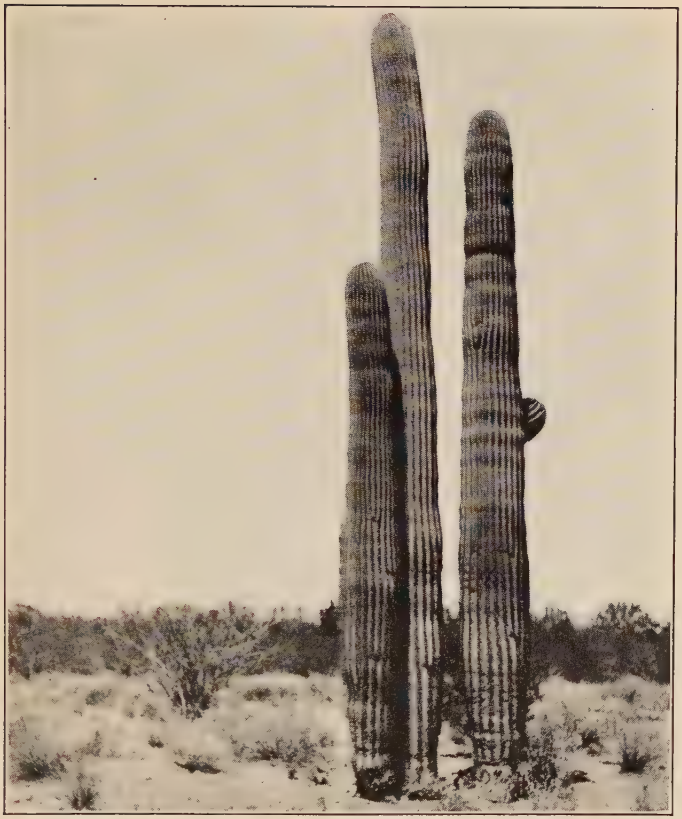
are The Hopi Buttes, Monument Canyon, a branch of Canyon de Chelly, and Monument Valley on the Utah border. Agathla Butte near Kayenta stands 1,225 feet high and is a conspicuous landmark.

At the foot of the Navajo Mountain on the Utah border, is the recently discovered Natural Bridge, which the Navajos call Nonnezoshe or the Rainbow Bridge. The region is very broken and wild and the few persons who make the trip have to go by pack train.

Most of the Arizona country I have described in two books, entitled, "Arizona Sketches," published in 1905, and "Southwest Sketches," published in 1920.

On my many travels in Arizona I carried a kodak and took numerous pictures. These have been arranged in an album of ten volumes of two hundred pictures each. They are a history by themselves, showing the country and people in their primitive state, which is rapidly changing and fast passing away.

It was my good fortune to make the acquaintance of Colonel James H. McClintock of Phoenix on one of my early visits to Arizona, and we have been good friends ever since. He has lived in Arizona



CEREUS GIGANTEUS
Wonder Plant of the Arizona Desert

for many years and has participated in many stirring events. He was captain of a company in Colonel Roosevelt's Regiment of Rough Riders in the Spanish War and was severely wounded in the battle of Las Guasamas, Cuba. He has been the Arizona correspondent of the Los Angeles Times for the past forty years and still holds that responsible position. He has also done much writing for other newspapers and magazines, and is the State Historian. His books on the "History of Arizona," and the "Mormon Settlements of Arizona," are authentic and of great value. He stands high in social and civic life and is affectionately called "Jim" by his many friends.

I have never lost my love for the soil and would rather dig in the ground than do anything else. Soon after moving to Los Angeles I bought a forty-acre farm near Compton, that was cultivated with hired help. The help was not satisfactory but was the best I could get. I bought a farmer's outfit of cows, horses, wagons and farming implements and set them to work. I soon found out that farming required water for irrigation to make it pay. I had an artesian well bored that furnished the desired quantity of water, but even then nothing seemed to prosper and the crops scarcely paid the taxes. As the land was

intended to be more for play and pleasure than for profit, I do not consider that the experiment was an entire failure.

There were a few old deciduous fruit trees growing on the place but these were not enough to make an orchard and I sent to Ohio for a supply of young fruit trees to start a new one. The trees were properly planted and made a good beginning but from lack of attention many of them died. I concluded that if I wanted an orchard I would have to do the work myself. To make sure of a good location for an orchard, I bought an additional forty-three acres of land adjoining my farm on the south, in 1900, that was also suitable for a botanical garden and arboretum. It was all flat land but hummocky and had to be leveled to make it good plow land. In spots some leveling had to be done by hand and ditches dug to carry water by gravity flow for irrigation. This detail handwork I resolved to do myself so that it would be done right.

In the afternoon I closed my office in town at four o'clock and drove out to the farm with my horse and buggy in an hour, and was back in the office again by eight o'clock the next morning. This arrangement

gave me several hours' time in which to do some work, even if I did have to work overtime. If the moon was shining, I could see to work at night as well as in the day time, and with my shovel and wheelbarrow the high spots were cut down and the low places filled up. If there was no moonlight, I hung the lantern on one of the handles of the wheelbarrow, which answered the same purpose and enabled me to work. This hard work was a real pleasure as well as a benefit physically, as it raised a sweat and gave me exercise which I needed and was an advantage in every way.

In doing this work I got warmed up and required fewer clothes to wear. While engaged in farm work, I went bareheaded, and wore only a sleeveless shirt, overalls, shoes and stockings. There was a small cottage on the place that was plainly furnished, where I slept and prepared my meals and enjoyed my hermit life.

After a spell of hard work that made me sweat profusely, it was a real luxury to get into a hot bath and wash off the grime of sweat and dust with soap and water, followed by a rub with a dry towel and a change of clean linen. Prior to taking such

exercise, I had spells of feeling chilly and took colds easily, but working in the open air changed all that and improved my health generally.

After putting the land in shape, I planted a second orchard of fruit trees in 1903 and took care of them myself. The orchard not only supplies my own needs but there is always a surplus of fruit to share with friends and neighbors, as I never sell any fruit.

Soon after starting my new orchard, I planted some fig cuttings, in order to get more trees. After they were transplanted and came into bearing, I discovered that I had a new variety of fig that I could not account for. The cuttings were taken from a black fig tree, while the new fig appeared to be a cross between a white and a black fig, and with an excellent flavor. To give the new fig a name, I call it the Munk Fig. It was a great puzzle where this new fig came from. I made inquiry of fig experts as to how new varieties of figs originated and received either an evasive answer or no answer at all. I finally wrote to Luther Burbank, the plant wizard, and asked him to solve the problem. He replied that planting the seeds of figs sometimes resulted in new varieties, the same as of other fruits, but that the process was tedious and expensive. He also said that

a new variety of fig might come from a sport bud on a cutting, for which there was no explanation. His answer seemed reasonable if not lucid, and I concluded that my new fig must be the product of a sport bud.

In 1906 I began carrying out the plan I had in mind of establishing a botanical garden of medical plants for the use of the materia medica class in the California Eclectic Medical College. In connection therewith, I also planted a grove of eastern forest trees and shrubs with which I was familiar as a boy. In this attempt I was successful and inside of fifteen years I reproduced a full-grown eastern forest. Many of the trees are two feet in diameter and one hundred feet high, and stand thick enough to cast a dense shade.

I got tired of seeing green trees all the year 'round and wanted to see trees in their bare branches. I had heard it said that eastern forest trees would not grow in our mild climate and wanted to know if that was true. All of the trees I planted grew splendidly, even faster than they grow back east; and it was astonishing to observe their rapid development. If my experiment proves anything, it shows that big trees grow much faster in Southern California than

they do back east. In planting the grove I tried to give it the appearance of a natural woods and must have succeeded as I have heard men remark, who came to see the grove, that it was an unusual "association of trees" and that there was "all in one."

My doctor friends who contributed to the garden were Professor John Uri Lloyd and Dr. Harvey Wicks Felter, Cincinnati; Dr. H. L. True, McConnelsville, and Dr. E. L. Welbourn, Union City, all of Ohio; Dr. Herbert T. Webster, Oakland, and Dr. A. J. Atkins, San Francisco, California. The Bureau of Plant Industry likewise contributed many foreign trees and plants for experimentation. With but one exception, all of these friends have visited the garden since its inception.

Some years ago, when the inspection mania was at its height, I lost plants from too much inspection. A package of plants that was sent by the Bureau of Plant Industry, or some other reliable firm, which had been properly inspected before shipment and so tagged upon arrival, was opened again by the local inspector, squinted at through a pocket glass and then pushed aside, untied, and its contents left exposed to dry and die. I lost not a few plants from such careless handling by parties who should have

known better. Inspection got to be such a nuisance that it was useless to send for more plants, and I quit the business in disgust.

The varieties of native forest trees in Southern California are few in number and consist principally of pine, live-oak and sycamore. The sycamores are found growing in the canyons, the live-oaks on the foot-hills, and the pine trees upon the mountains. They are also sometimes used as ornamental trees in public parks and private grounds.

Because of this paucity of native trees, many foreign trees of the evergreen sort have been introduced, chief among which are the eucalyptus from Australia and the pepper tree from South America. These trees will endure ten degrees of frost for a time without suffering any injury, but cannot withstand a hard freeze. The pepper tree is very attractive and is much prized on account of its beauty. Both the eucalyptus and the pepper tree emit spicy odors that are agreeable aromatic stimulants.

Twenty years ago I planted a lot of eucalyptus trees without knowing just why I did it, unless it was to have a grove of eucalyptus trees growing on the farm. I took great pleasure in seeing them grow, and now find that I have an ample supply of wood

for fuel and back logs a-plenty for the large fireplace in my new farm house.

Three young men of about the same age, who were students in the Eclectic Medical Institute, met for the first time in Cincinnati in 1867. Now, after a half century has passed, they find themselves the sole survivors of the crowd of students which thronged the classic halls of their Alma Mater during the late sixties.

I was one of that group of young men. The story of my life has been told in the preceding pages and needs no further comment.

A second member was Dr. Herbert T. Webster, also of Ohio, and born in 1847. After graduating, he located and practised medicine for a number of years in Niles, Ohio. Catching the western fever, he moved to Oakland, California, and soon established himself as one of the leading physicians of that growing city. He was organizer and professor of the California Medical College in San Francisco and was the backbone of its faculty. He also was editor of the California Medical Journal for a term of years. He wrote and published several standard works on medicine—The Principle of Medicine, Dynamic Therapeutics, and the New Eclectic Medical

Practice Complete—and is held in high esteem as an authority on clinical medicine. Dr. Webster moved recently to Southern California and bought himself a home in Alhambra.

Professor John Uri Lloyd was the third and youngest member of the trio, who qualified as a chemist and was professor of chemistry and pharmacy in the Ohio Eclectic Medical College for many years. He is the founder of the Lloyd Library and the discoverer of Alcresta, which is known to science as Lloyd's reagent. He is father of colloidal chemistry in America as connected with medicine and pharmacy, and has made it a subject for study during the past forty years. He is the author of many books. He wrote Etidorhpa, a book of scientific romance, in which he foretold the existence of argon and radium before they were discovered. He has also written several books of Southern folklore tales, scientific books on chemistry and pharmacy, and monographs innumerable on many subjects.

He loves the desert and was sent to Turkey and Arabia by the United States Government to investigate the subject of opium culture and Oriental products. In the summer of 1908 he accompanied me on one of my trips to the wonderland of northern

Arizona. We met at a convention of Eclectic physicians in Kansas City, Missouri, in June, after which we traveled westward on the Santa Fe Railroad to Gallup, New Mexico, where by previous arrangement we were met by Lorenzo Hubbell's team and taken to Ganado, which is the oldest and largest trading post on the Navajo Indian Reservation and one of the show places of Arizona. From Ganado we went by team on a scout to see the cliff dwellings in Canyon de Chelly and then visited the Hopi villages on the Black Mesa.

In our talks he advanced a new theory of world building. He said that the physical features of much of the earth's surface were made by geyser action in an age when geyser action was general and operated on a large scale. He claims that geyseration explains perfectly the stratification of many of the rocks while sedimentation does not.

Although his home is in Cincinnati, he makes frequent trips to Los Angeles, when we three old cronies meet to compare notes and talk over old times. During all these years, from young manhood to old age, our friendship has stood firm and steadfast, and is now even richer and better than at any time in the past.

Vital Force and the Lifeline

LIFE IS THE expression of vitality, the manifestation of vital force.

Of all the forces in nature vital force is the most subtle and incomprehensible. It manifests itself in an endless variety of forms and its complicated processes are marvelous and past finding out. At one time it builds on a colossal scale and supplies a giant's strength; and, again, it constructs so minutely and delicately that the object of its concern is invisible to the naked eye and destroyed by a touch; yet each object, be it either large or small, is distinct in its individuality and absolutely perfect in all its parts.

We are apt to regard life merely as a fact and never think beyond the necessities of living. Man's capabilities are almost wholly spent in the struggle for existence, trying to get enough to eat and drink, and raiment wherewith to clothe the body. We content ourselves by thinking that life is a commonplace affair and give it but scant consideration.

Life is a profound mystery that in all probability will never be fully solved. Man stands awed and

helpless in its presence, and with all his striving to fathom its depths he does not seem to get any nearer to the truth or obtain a satisfactory solution of the difficult problem.

The origin of life is nature's well-guarded secret that baffles scientific investigation. In the absence of any definite knowledge as to its source, we can only believe that it was spoken into being by Omnipotence.

The diversity of form and feature is amazing. Among the teeming millions of people living upon the earth, there are no two persons who look exactly alike. This difference is not stationary but progressive, as changes are taking place continually within the body during every moment of life. There is no halting or turning back, however much we may want to stop, until we are finally swept by the ruthless hand of time into the great unknown beyond!

In the process of reproduction, the vital spark which gives it life is implanted in the germ, that, once started on its earthly career, grows and lives after a definite plan into a perfect creature. What gives it life, shapes its form and regulates its growth, is an enigma. After living its allotted time, it dies and disappears as mysteriously as it came.

Nature is as prodigal of life as she is prolific in design. The quantity of protoplasm which she wastes in procreation, shows that she knows no limit to her resources. Not only does this waste occur at the threshold of life, but the same prodigality goes on forever from natural causes, such as accident and disease, animals preying on one another, and nations going to war. Life appears to be of such little value that it is being destroyed *en masse* continually, as dust is swept up with a broom. Even when the individual reaches full maturity, life lasts only a little while and vanishes as if it had never been.

As all life is of the same essence, it would be invidious to make distinctions or draw comparisons; yet in the whole creation man is the only creature that has the conceit to claim perfection, or the audacity to assume that he is a superior being, the finished product of evolution, and the unchallenged monarch and ruler of the earth!

When a man is born into the world he is endowed with sufficient vitality to carry him through his brief span of life. Whether the amount of inherited vital force can be increased or diminished, is a question. That it can be conserved by correct habits of living,

is conceded, and that it is suddenly extinguished by death we all know.

The Bible gives the life of man as "three score years and ten," which is approximately correct; but under natural law his endowment of vital force should enable him to live a full one hundred years. By a law which governs the animal kingdom, each species is possessed with enough power to live five times as long as it takes it to grow to maturity. As man does not reach his full stature until the age of twenty, he should live to become one hundred years old. That but few persons ever live to reach this advanced age is no fault of nature but is the result of broken laws that pertain to right living. It is even possible for man to live longer than a century, as is proven by individual examples of longevity, but only a very few persons ever reach that goal. It is, indeed, an unusual occurrence to find a centenarian, as the large majority of mankind dies comparatively young.

The average of human life has been estimated to be about thirty-five years and it is claimed that this is an increase over what it was a century ago; so that the natural tendency is toward a longer rather than a shorter life. That any man ever lived to reach the

age ascribed to Methuselah, is an utter impossibility. To attain any such age would require a complete reversal of nature, which, of course, never happened and never can happen, as the laws of nature are fixed and immutable.

Man has implanted in his nature a desire to live and enjoy a long life of happiness. He is continually seeking after the fountain of eternal youth (which does not exist), where he may drink and remain forever young. He has this inborn desire to live, that makes him seek to avoid death. Occasionally the burden of life becomes too heavy to be borne and is shuffled off by a deliberate act of suicide. In the very nature of things there can be no perpetual youth as everything living is born to die and death must have its toll.

Many means have been tried during recent years to prolong life indefinitely, but without success. Search was made to find an "elixir of life" that would supplant the impossible "fountain of youth," but this also has failed.

A score or more years ago the distinguished French physiologist, Brown-Sequard, announced that he had discovered a sure cure for senility. It consisted of a glandular secretion that was injected

hypodermically into the system, where it was supposed to act by some kind of hocus-pocus, to restore the vigor of youth and postpone old age. The treatment, however, failed to produce the desired results and proved to be only another foolish experiment that cost many lives. More recently the method was changed to transplanting the entire gland into the human body, which plan has likewise proved to be a failure. About the same time the new germ theory of disease had its origin, which is the greatest fallacy of the age, as time will prove.

Man's worst enemy and his greatest besetting sin is his own unreasoning credulity or gullibility, which makes him eager to believe everything he hears and to snatch and swallow every tempting bait that is offered, hook and all, even though it kills him.

It is interesting but sad to note the changes in form and features that take place during a lifetime. The child is always sweet and attractive but youth and beauty fade away as life goes on. The freshness of youth soon vanishes and with advancing years come white hair, impaired sight and hearing, wrinkled skin, bent form and tottering steps, so that it is difficult to recognize the child and centenarian as the

same person. The boy is eager to become a man and spends much of his time in building air castles for the future. The old man wants to become a boy again and grows reminiscent of the past, talking about what has been.

We may not like the conditions that surround us but we make a grand mistake when we attempt to change the natural into the artificial. Too much civilization is an evil and over-refinement is a curse.

In addition to the outward changes that can be seen, other equally important alterations are taking place within the body. Metabolism becomes disturbed, cell activity is retarded, and the vital functions deteriorate and fail. The repair work of the body is being imperfectly done and that mysterious and fatal disease of old age, known as arteriosclerosis, makes its appearance. The walls of the arteries become hard and brittle, when under an increased blood pressure caused by excitement or over-exertion, a blood vessel may suddenly rupture and cause apoplexy, paralysis and death. It can no longer be said that a man is as old as he feels, but is just as old as are his arteries. If he goes slow and takes life easy, he may run on comfortably and carry a

light load for many years; but if he forgets himself and makes a misstep or overworks, he at once breaks down beyond repair and dies.

Longevity, or the ability to live long, depends largely upon the endowment of vital force. It runs in the blood and is an inherited gift that makes families long or short-lived according to how it functions. If the vitality is strong, it takes more than an ordinary disease or accident to produce death, but if the vital spark is weak it is easily snuffed out. The physician, more than anyone else, is familiar with its action as he observes the difference daily in his attendance upon the sick.

Different persons are affected differently by sickness. Some live a long life in perfect health, while others cannot say that they ever feel well; but the majority of human beings have the average experience of being alternately well and sick at longer or shorter intervals. In this respect there are many persons who seem to move in cycles of several years between sick spells. From natural causes the system becomes clogged with impurities, when sickness acts as a cleanser by getting rid of the worn out and waste material through the emunctories. Every such attack is beneficial to the patient if he has the vitality

to endure the reaction of organism and can successfully pass the crisis. After such a siege the body has become thoroughly renovated and rejuvenated, and new tissues are built up from the bone. Such a person may not have his youth restored as to years but gets his body renewed and obtains a new lease on life that will last for many years, or until the return of the cycle period when another sickness is due, unless death from violence should happen in the meantime.

The strength or weakness of the vital force cannot always be correctly judged by the outward appearance. A fine physique may have the appearance of robust health and yet be inherently weak; while a complaining, puny little weakling may be full of vital vigor and live to a ripe old age. I have known strong men to die from a scratch and others to recover from some serious sickness or injury that would have been enough to kill several ordinary men.

The recuperative power of nature is wonderful if it is given only a fair chance to act. It is never wise to despair or give up hope in any case of sickness while a spark of life remains. Sometimes, in a desperate case, the very best remedy is to trust to

nature and hope for the best, as all experienced physicians know.

About fifty years ago Professor Powell discovered the life line in the human subject, by which means the vital force can be measured. Its use enables the physician to judge correctly of his patient's vital stamina and predict his ability to combat disease.

The seat of the vital force is in the cerebellum, at the base of the brain, and is either strong or weak in proportion to the size of the brain. To ascertain its dimensions, a line is drawn from the occipital protuberance on the back of the head to the supra-orbital foramen above the eye. The distance from this line to the external auditory meatus, or ear hole, designates the size of the cerebellum and indicates the strength or weakness of the vital force. If the distance measures one-half inch, it means that the patient possesses a fair amount of vital tenacity, and if it is less than a half inch the vital force is weak. Three-fourths of an inch marks the vital force strong and a full inch means that it is very strong.

That life hangs by a single thread is literally true and is demonstrated by the anatomy of the spinal column. Where the head rests and rotates upon the two upper vertebræ, called the atlas and axis, they

are so peculiarly constructed that life depends upon the strength of one small ligament. The odontoid process of the axis projects upwards into the lumen of the atlas and is fastened there by the odontoid ligament. If this ligament is ruptured, the odontoid process falls backwards and presses upon the spinal cord, and produces instant paralysis and death. The pressure thus made is exerted upon the medulla oblongata, at which spot physiologists have located the vital point. Although the anatomy of the cervical vertebræ thus seems to be defective and dangerous, as a matter of fact it is relatively as strong as any other part of the body and proves fatal only when the neck is broken.

Death often occurs suddenly, but usually it takes place gradually. It is a mooted question whether natural death is ever instantaneous. The body dies by degrees, one vital function after another failing, until last of all respiration ceases. When death threatens to claim the body, as long as there is no serious disturbance of the vital organs, there is no danger of immediate collapse. Only after the temperature, pulse and respiration become decidedly abnormal, is death imminent. The death rattle is caused by an accumulation of mucus in the larynx,

which the enfeebled respiratory movement is unable to expel, but is not always heard.

It is likewise a disputed point whether there is any great physical pain or mental anguish experienced when death takes place. The agony of dissolution, if there be any, is felt during the acute stage of the disease, when the nerves are tense with feeling. During the progress of a fatal disease, nature mercifully prepares the way for death by causing a physical and mental lethargy to creep over the body, that blunts the sensibilities and gives immunity from suffering. What sometimes appears to be pain in uttered groans and facial contortions, does not necessarily indicate suffering, as such effects are sometimes produced by involuntary reflex action of the nerve centers and are not the result of conscious pain.

President's Address*

WE MEET AGAIN today in another annual convention to represent national Eclecticism, or the American practice of medicine, in the United States. I need not repeat the history of Eclecticism at this time, as the story has been told often and is readily accessible to those who are unfamiliar with the subject. Suffice it to say that it started as a protest against the murderous practice of Allopathy about one hundred years ago, in much the same manner as other systems of healing have started since that time.

Notwithstanding that Allopathic medicine has been acknowledged a complete failure, as is proven by the fact that the dominant school of medicine has completely reversed itself during the past fifty years by changing from the heroic dose to giving no medicine, yet, in the face of such evidence, Allopathy assumes to be the embodiment of all knowledge and wisdom, and asks to be placed in supreme power by the enactment of laws that would give it exclusive control.

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* Delivered before the National Eclectic Medical Association, at the Annual Meeting held in Louisville, Ky., June 20-21-22-23, 1911, and reprinted from the N. E. M. A. Quarterly, September, 1911.

It wants only Allopathic physicians appointed to the public health service, aims to dominate all schools of learning, and even seeks to enter the privacy of the home and dictate what shall be done there. During the past twenty years, while honest men slept, the American Medical Association has built up a powerful political machine which is intended to promote its own arbitrary and selfish schemes, and has succeeded only too well in its endeavors. But at last the people have been aroused to a sense of their danger and are earnestly protesting against the evil influence that is being exerted by this trust power.

ORGANIZATION

During recent years the tendency in all branches of business has been to unite and concentrate every line of business into a single combination or corporation, so that by the combined influence of large numbers and great wealth, competition, which is the life of trade, is killed and the small dealer put out of business. By such selfish and unfair methods every living interest has become a monopoly that is managed in the interests of a few men and has made them immensely rich at the expense of the many. This is certainly the age of mammon worship, and

at no time in the history of the world have such vast individual fortunes been accumulated as have been amassed in our generation. Individuality has thus become lost in the corporation and corporations are said to have no soul, conscience or responsibility. The same greedy, selfish power that rules in the business world seeks to get control of all educational institutions and of the professions and limit their number to the wealthy class.

Allopathy, through its general organization of the A. M. A., is opposed to every system of healing or treating the sick but its own, and is doing everything in its power to prevent competition. A clique in that body, although in the minority, yet by its splendid organization controls the majority. Its system consists of a perfect organization of all the societies, county, state and national, with a full set of organizers and promoters in each state, who work together under the direction of the clique. Its influence thus becomes far-reaching and aims to compel every physician in the land either to join the association or quit doing business.

The independent school of medicine which desires to continue a separate existence, finds it imperative that all of its members must unite in a counter organi-

zation to resist such oppression and "fight fire with fire." This emergency is what brought about the reorganization of Eclecticism in a closer affiliation of the several state societies with the national body, and is the chief reason for our being here today. It is highly important that all loyal Eclectics stand together in this crisis and present a solid front to the enemy. Standing alone counts for but little in such a struggle for liberty and independence. It is only by uniting our individual units throughout the land and acting together in unison through the National Association that we can ever hope to measure up to our full strength and maintain our standard. The work of reorganization has progressed rapidly and is about completed, and success seems to be assured. If anyone among us is in doubt as to what he is or where he stands, or is of that half-baked, nondescript "I don't know what I am" kind of an Eclectic, it is high time that he be immediately reconverted or sent where he belongs.

Any enterprise that is a success must be properly managed. If your private business is permitted to run itself, or is managed by an enemy, it is certain to fail. The same is true of Eclecticism if it is conducted on a similar basis. The thing that is most

needed is being done, standing together in behalf of our own interests and fighting the common foe. Nothing delights Allopathy so much as when it does things to its rivals. If it can create any disturbance in our ranks and lose us a college, or cause dissatisfaction and discord among the members of our state societies and get them to pull at cross purposes with the National Association, the machine is only too well pleased with its work. Our association represents the strength of Eclecticism in the nation, and the officers are its authorized agents to see that its business is properly done. These men are worthy and deserve your utmost confidence and need your earnest support to give them success. If anyone here is in doubt or is pessimistic, suspect your enemy if you must, but believe and trust your friends. Your officers are striving to improve conditions, and if they make mistakes rest assured that they are not intentional. When the new order of things is established and every Eclectic becomes an earnest and active worker for the cause, it will be a glad day for Eclecticism. The strength of an army does not rest wholly in numbers, but much depends upon the fighting quality of its soldiers who will stand in the face of the enemy and receive unflinchingly the shock

of battle. Cowards and skulkers are no help in such a crisis, and the sooner they are lost the better it is for the loyal fighting soldiers.

EDUCATION

Judging from results, there seems to be something radically wrong with both the objects and methods of teaching. There is even much difference of opinion as to what education really consists of. As long ago as the seventeenth century, William Penn wrote on the education of youth, and said: "We are in pain to make them scholars, but not men. To talk rather than to know, which is true canting." In 1863, Thomas L. Eddy, the noted Methodist divine, delivered an address at the commencement exercises of the University of Iowa, in which he remarked, "Next to the question of what becomes of all the pins, is the question of what becomes of our premium college graduates." Only recently Charles W. Eliot, retired president of Harvard College, stated in substance that a five-foot shelf of selected books, diligently read and studied, was sufficient to give a man a liberal education. These quotations show the different opinions of men at various periods in our history on the subject of education and denote that the standard of perfec-

tion is far from being unanimous. Much time and many subjects, as well as much literary junk, are included in the average course of instruction. Every curriculum contains some useless material and no single schedule can be constructed that will fit perfectly the needs of each pupil. The elementary branches are apt to be slighted and too much time is devoted to finishing, which is but a poor veneer to cover up existing defects. How common it is, even among educated people, to find those who do not write or speak the English language correctly, while spelling has become one of the lost arts.

In all education the rudiments are always important, but are often slighted, to the irreparable damage of the pupil. The time that should be devoted to essentials is given to foolish fads that may please the vanity of the teacher, but are of no real benefit to the student. This condition is as true of medicine as it is of education in general, and is to be deplored as it wastes valuable time and squanders hard-earned cash. A course of study should be selected that is adapted to the pupil in the direction of his natural bent; and knowledge must be mixed with common sense in order to get the best results.

Education is being conducted more and more on

the monopolistic or corporation plan. Vast sums of money are spent in buildings, endowment and equipment, and because the institution looks big its popularity seems to grow with its size. Influence, which means more money, is steadily going into these large institutions, until they have grown to be top-heavy and unwieldy. The purpose is to reduce the number of colleges by increasing their size and limiting the product. Money, indeed, is a great power and of great value when sanely used in all the affairs of life, but it is not everything and should not be worshipped supremely as was the golden calf. When education means only mere show or material gain, it has missed its mark and begins to decline. Such is the history of great wealth among all nations since the world began and it keeps repeating itself. The smaller college does more good and better work in proportion to its size than does the university. In proof of this assertion, note the fact, which is frequently seen, that the smart professor in our large institutions is nearly always a graduate of some small college. Money by itself cannot accomplish everything, but to become really effective it must be accompanied by brains. Wealth is often more of a hindrance than a help, as its possession removes the

incentive or necessity to work, and we all know very well that "there is no excellence without great labor."

THE POOR BOY

Abraham Flexner, of the Rockefeller Foundation, in his report speaks flippantly of the poor boy as not being worth a thought. He says, "It is clear that the poor boy has no right to go into a profession for which he is not willing to obtain adequate preparation," and might as well have added that the poor boy has no right to live, anyhow. This statement not only shows prejudice, which is ignorance, but is also a misstatement of fact. When he talks like that he slanders the best men that ever lived, who started poor in life. The boy who has an ambition to engage in a profession is not only willing, but anxious, to acquire the necessary preliminary preparation to fit himself for the higher studies of his profession; but from lack of time and money he is not always able to acquire such knowledge in the usual manner, but succeeds in his own way if he is given half a chance and is let alone, by steady work and a fixed determination to win.

It used to be that the poor boy had a chance to make something of himself, and how grandly he

succeeded history often records. Abraham Lincoln and Thomas A. Edison are only two illustrious examples, out of many that could be mentioned of successful individual effort, who practically never went to school nor even saw the inside of a college, yet became world-famous as men of achievement. Compared to such men of giant intellect, Mr. Flexner is scarcely more than a microbe. His class of gentry are never able to earn a living for themselves, but are always looking for a string that is tied to some man with plenty of money who will support them. Such a connection gives the small man some courage and a feeling of much importance and affords him the harmless amusement of barking and biting at the heels of his superiors.

Under the modern conditions of society the poor boy has but little show and sees nothing ahead but degrading drudgery. He cannot engage in any business for himself as he has no capital to invest and is unable to compete with the trusts; he is shut out of college for the lack of funds to pay his bills and cannot enter a profession because of unreasonable requirements; and he is even denied the right of apprenticeship to learn some useful trade by the labor unions. All that he can do is either to become

a hobo to wander up and down the earth begging a living, or else become a criminal and by committing a crime break into jail to spend a lifetime. The rich boy, with plenty of money, goes to school but fails to appreciate his opportunity. Being reared in luxury, he does not care to work or study, and spends his time in ease, idleness and pleasure. If he lacks anything, he has money and can buy it; but a whistle cannot be made out of a pig's tail even if the pig has money.

STANDARDS

Some general standard of regulation and conduct for the physician seems necessary to guard the dual interests of the profession and the public. It is not the people, however, who ask for medical legislation, but the political doctor who needs support and wants a job. The question is not so much whether there be a standard, but, if adopted, that its provisions be equitable to all concerned. When a physician assumes the responsibility of prescribing for the sick, he should be able to show some authority for doing so and give some evidence of his qualifications. There are many persons who believe that the system of examining boards now in vogue is not the best method for establishing a standard.

In such a system there is too much difference between the various states, and no two of them agree. As it is, the physician who moves from one state to another cannot practise until he passes another examination and receives a new license. This seems unnecessary and discriminates against the experienced practitioner, in favor of the young graduate who has not yet acquired much practical knowledge. If a man has received his license in one state, or is fit to practise medicine at all, this right should be recognized by every state in the Union. But the political doctor, who manipulates legislation, does not want it that way. His object is to limit the number of physicians and hinder the doctor from moving from one state to another. The claim is sometimes made that there are too many doctors, which may be true of the kind who make the complaint, but cannot be true where there is competition. These kickers are usually failures who cannot meet competition. The competent, successful physician does not have to beg for a position or a salary, as he is fully able to support and take care of himself.

There must be some plan of reciprocity devised which will permit the licensed doctor to practise in any state of the Union in which he chooses to live.

Many able men in the profession, regardless of school, who are in active practice and exceptionally skillful and successful physicians, cannot pass a state board examination. The subjects that are included in such an examination are not of the practical sort—the practice of medicine and surgery and the curing of the sick—but consist of theoretical and laboratory subjects which interest only teachers and research men and are of no particular value to the physician. Such an examination makes it impossible for the practical man to pass the board, which prevents him changing his abode with a view of continuing in business. Many members of the various state boards would fail to pass their own examinations if put to the test. It is this obstructive policy which has been injected into all modern medical legislation that makes it so objectionable. Its purpose is to have fewer medical colleges and limit the number of graduates and physicians in order to give the political doctors a chance.

It does seem as if there might be a better standard fixed for the medical profession than a state board examination. The man who holds the diploma of any reputable and qualified medical college should have his passports to do business anywhere in the

United States. The adoption of this rule would form a feasible and just basis for all and nobody could be charged with prejudice or unfair dealing. Let the colleges be censored, if necessary, only so that all are required to do a reputable and square business; give a competent and thorough course in all branches that pertain to medicine, and graduate no student who does not have merit. After a man has once graduated and gotten his diploma, it ought to give him permission to practise in any state or community in the Union.

NATIONAL LEAGUE

We, as Eclectics, are a separate and independent school of medicine, but we are not the only one. It is as necessary and beneficial to have a variety of schools of medicine as it is to have parties in politics or sects in religion. Each school, party or sect permits the citizen to have a choice, to select what he wants and gives him the opportunity to act with those of his own way of thinking. This is his constitutional right under our system of free government, of which we are all so proud. Attempts have been made to invade and annul this inalienable right. The same spirit of monopoly which pervades the com-

mercial world is also found in medicine. To establish one school of medicine to the exclusion of all others would create state medicine, which is just as obnoxious and dangerous as is state religion. A variety of schools, parties and sects is an advantage, as it causes a friendly rivalry by each one striving to excel the others, and a healthy competition that benefits the majority, which is as it should be, especially in a government like ours where majorities rule. This exclusive power has been sought after many years by the political ring in the A. M. A., which it hopes to obtain eventually through state and national legislation.

All of the minor schools of medicine, known as the Allies, are opposed to such action on the ground that it is class legislation and unconstitutional; but neither one of the Allies is strong enough to engage the enemy single-handed. It also does not seem to be convenient for them to unite their several interests in one counter organization. In this crisis a new and welcome friend has appeared upon the scene to lend a helping hand. The National League for Medical Freedom was organized only one short year ago as a lay movement in opposition to the offensive activity of the A. M. A. to force the Owen's bill

through Congress and establish a Public Health Bureau. Owing to the League's timely and energetic protest, the bill failed to pass, but it is up again in a modified but no less objectionable form, to be acted on during the present extra session of Congress. That the bill will again be defeated goes without saying, now that the people have been warned of their danger. If such a bill ever becomes a law, it will be a serious menace to liberty and freedom in the United States, and will be the entering wedge for other objectionable and harmful legislation of a like character.

The scope of the League is nation-wide, and it has branch offices in nearly every large city of the Union. Its function is to expose and oppose the evil designs of the medical trust which it endeavors to fasten upon the states and nation; to give publicity to every point of interest and teach the people the right and wrong of everything that pertains to the subject. It is pledged to oppose every attempt to legislate against the interests of the people or to rob the citizen of his liberty and right to choose his own medical adviser. The objects of the League meet exactly our

wants, and it behooves us to "pool our issues" and "hitch our wagon to a star" that will carry us safely and surely to victory.

CONCLUSION

In summing up, it can be truly said that Eclecticism is in better condition than it has been in many years. The incubus of apathy and lethargy has been thrown off and replaced by a spirit of optimism that augurs well for the future. Reorganization has been completed with a better feeling in the ranks and a closer affiliation of the state societies with the national than ever before. Differences that have been a disturbing element and a bar to success have been amicably settled and stumbling blocks removed. Larger and better meetings than usual have been held during the year, and an increased zeal and activity manifested among the members. A new interest has been awakened, smoldering fires rekindled, and the vital faith in Eclecticism restored. The slogan, "Once an Eclectic, always an Eclectic," is again heard in the land. It is almost inconceivable how any Eclectic could ever think of changing or becoming anything

else, when he already has the very best there is in medicine.

We can well congratulate one another and rejoice together at the favorable turn in Eclectic affairs; and let us all here and now pledge ourselves anew in loyalty and fidelity to the cause we love.

Adaptation of Life to Environment

MAN WAS MADE for the earth and not the earth for man. The greater must include the lesser and the process cannot be successfully reversed. The earth was made long before man appeared who was then created to fit his environment upon the earth.

The earth is only an atom in space which is the most stupendous and staggering fact in nature. Space is something so vast that it is incomprehensible to the finite mind of man and, like eternity, is without beginning or end.

As potent and versatile a force as we know electricity to be, it is no stretch of the imagination to say that it is existent and active throughout the universe and is the one agent that furnishes the heat, light and power of the revolving worlds in space. Gravity is a form of electric energy (electro magnetism) that attracts all objects within a given radius toward a common center; and balances the stars and keeps them in place.

The earth makes one complete revolution on its axis every twenty-four hours, which makes it seem

as if we stood upon our feet one-half of the time and upon our heads the other half. If this be so, we are not conscious of the fact because of the influence of gravity that holds us in our proper relation to the earth.

There is really no up or down upon the earth, as it is not flat, but round and changing its position continually, so that the perpendicular affects only the individual object in its relation to its immediate surroundings. If we were consciously affected by the change of position, we would have the sensations of a man standing on his head, which would cause a serious disturbance in the action of the vital functions and soon cause death.

Nature has wisely made provision for such action not to produce any unpleasant or injurious effects. Every living thing has been harmoniously adapted to its own environment for some useful purpose. Whenever Nature's plans are interrupted and a cataclysm occurs, it is merely an unimportant incident in the cosmic scheme. She quickly heals the breach and continues in her regular course as if nothing had happened.

The endless variety of life that is found upon the earth is startling and something wonderful to

contemplate. All life is of the same essence but is manifested in a variety of forms. Of the principles of life, per se, we know absolutely nothing. During all the ages of the past, it has eluded discovery and, judging the future by the past, it always will. Life is Nature's deep secret that is not for man to know, and both its coming in and going out are equally obscure and mysterious.

Every day we meet in the open many kinds of life, and seeing them often makes them familiar and common, so that they fail to impress us. Only the unusual and rare things of life attract our attention and we are forever hunting something new and curious. We might find the common things in Nature just as wonderful as are the rare if we would only stop and think. The lowest form of infinitesimal life is just as perfect in its organism and action as is the highest type of life.

The reason for our not understanding animals any better than we do is because of our ignorance and prejudice, and we would think more kindly of them if we knew them better. The inferior animals, as we are pleased to call them, are just as wonderful in their anatomical structure and physiological action as is man, and they are even his superiors in some

respects since they know and do some things that man does not know and cannot do. It would at least be nothing more than right to give to animals such credit as they deserve instead of denying them everything as is generally done.

There are manifold intelligences just as there are many forms of life and each kind is sufficient unto itself. All animals live in a little world of their own which they know and understand. They have a language or at least some means of communicating with one another, even if man does not understand them. We profess to know them but only speak of them out of our ignorance. Man is apt to assume wisdom that he does not possess and says by his actions, if not in so many words, that what he does not know is not worth knowing.

There are many things in life about which we may believe much and know very little, and because of our lack of knowledge we often err grievously in judgment. We need an excuse to hide our ignorance and grudgingly give to animals credit for possessing instinct but deny that they have any intelligence or reason. They have our five senses and many of the mental faculties are alike common to both man and beast, such as love, hate, fear, joy, anger, jealousy,

imitation, memory; yes, and sometimes even reason. An animal can be taught like a child in many things and shows by its actions what it thinks of the treatment it receives. In recent years there has been a closer study of animal nature with a change for the better showing a growing sentiment in their favor.

In the beginning the earth was entirely covered with water and enshrouded in darkness by thick clouds of vapor that hung in the sky. After long ages and many changes, the earth cooled sufficiently to permit the presence of life, which then appeared, first in the water and afterwards upon the dry land. It required countless ages to fit the earth for the habitation of living things, but as soon as the conditions were right, life sprang into being. All life has its origin in water and is, therefore, water born. Oxygen is necessary to all animal existence and is obtained either from air or water. Man is no exception to the rule and, although he has passed beyond the all-water stage and reached a high state of development, even yet he distinctly shows his aquatic origin by living exclusively in water during his nine months of fetal life.

All animals are not suited to the same environment, and often exist under diverse or opposite conditions.

In the case of fish, some live wholly in salt water while others live entirely in fresh water. However, there are exceptions when salt water fish make brief excursions into fresh water without harm, as in the case of the salmon during the spawning season. The eel, also, is born in the ocean but emigrates to fresh water streams. Life can only live and flourish in environment for which it was created and adapted.

Amphibious animals like the frog live both in water and on dry land. While the frog remains a tadpole it functions as a fish, but soon changes into a land-going animal. It loses its tail by absorption and develops legs instead of fins, which enable it to creep and hop. The gills which extracted oxygen from the water are replaced by real lungs that breathe and extract oxygen from the air. Many marvelous changes occur in Nature that seem like miracles, because they are unusual, and we do not understand them.

Deep sea dredging has brought to light much new and curious life. The abysmal depths of the ocean are pitch dark and almost cold enough to freeze ice owing to the flow of cold water from the Arctic Ocean to the equator. It was thought for a long time that in this dark and cold underworld of water

no life could exist, but investigation has found it to be teeming with interesting life. Many kinds of fish of strange forms and bright colors move about through the water in perfect comfort. The weight of ocean water at a depth of 2500 fathoms is two and one-half tons to the square inch, and that increases with depth. An ordinary fish would be crushed by this enormous weight, but the abysmal fish is so organized that it receives no injury. Its tissues are soft and porous and freely permeated by water, so that the animal is practically a part of the water which surrounds it. However, when one of these fishes rises out of its natural zone, it loses its self-control and shoots rapidly upward to its death. The reduced pressure liberates a gas that fills the tissues and causes the fish to swell up and explode. They are mostly without eyes and therefore blind, but have a fine sense of touch and feel their way automatically. Some of them are endowed with an auto-lighting apparatus of special organs which produces a luminescence that serves the purpose of eyes and enables them to find their way and take their prey.

It appears to be just as dangerous for a shore fish to descend into great depths as it is for a deep water fish to rise to the surface. Every variety of fish is

adapted to its own sphere of action and cannot change its habitat with impunity, which is also true of all animals.

When a whale fills its lungs with air and "sounds," its body is subjected to a considerable increase of pressure that is borne mostly by the ribs, and becomes dangerous only when the animal dives deep enough. Several such broken and repaired bones have been found in skeletal remains, which show that denizens of the briny deep, like land animals, are sometimes the victims of serious accidents.

The atmosphere in which we live is much lighter than water and exerts a pressure of fifteen pounds to the square inch at sea level, and diminishes with altitude. An adult man supports between twelve and fourteen tons of air as he moves about upon the earth, but without feeling any sense of inconvenience. The atmosphere is his natural element and necessary to his existence.

Atmospheric pressure exerts an important influence on life as a regulator of the vital functions. Its effect upon the human body may be likened to the action of the governor on a steam engine or the pendulum of a clock. When this control is lost, the

machinery of the body runs wild and rapidly goes to smash. It acts as a sedative to the brain and nervous system and soothes and quiets the action of the vital functions, which prevents them wearing out. When the atmospheric pressure is reduced, the action of all the vital organs is accelerated, the heart becomes excited, the pulse rapid and the respirations more frequent.

Atmospheric pressure is an important factor in climatology and can be used with benefit, either as a sedative or a stimulant, according to the effect that is desired. The low altitude of sea level, or below, has a sedative effect, while a high mountain altitude acts as a stimulant. Nervous persons who live in the high mountains often have to descend to sea level to get relief from their nervousness. Persons who are afflicted with any kind of organic disease should not venture into a high altitude, as it would be dangerous by overtaxing the affected organs.

In times past it was believed that the rapid breathing which was experienced in mountain climbing was due to a lack of oxygen in the air, but later experiments proved that the same proportion of oxygen is present in the air everywhere at all times.

The cause of more rapid breathing at an elevation is because the lungs absorb less oxygen under high pressure than under low pressure, to supply the physiological needs of the body. After some time the lungs become accustomed to the change and normal respiration is re-established. The atmospheric pressure at sea level suits most people best and these regions are also the most populated.

The entire trend of civilization is to alter conditions by changing things. Many people who live in the country want to move into the city and but few city folks ever care to move into the country. Thus it is that there is a constant stream of people flowing into the city from the outside where they become absorbed by the mass and are lost as individuals, unless they are distinguished in some way. In a few generations the family likewise disappears and is as though it had never been. Artificiality in any line, that may seem to be good for the time being, is of no permanent benefit but tends toward the deterioration and destruction of the human race.

Nature has done things right without help from the beginning of time and will continue to do so as

long as time lasts. The feeble assistance that man can give her amounts to little or nothing and is likely to do more harm than good. The truest thing in the universe is Nature and if Nature is not true there is no truth.

Civilized man is a very destructive creature. He goes marching up and down the earth, ripping up the ground, felling forest trees, leveling mountains and filling up valleys in his ambition to conquer the earth, and calls it progress. He makes a plaything of life as if it were a toy and tortures and kills every living thing that crosses his path. By his greater knowledge and power he is made capable of doing much more harm than was done by primitive man. The savagery, brutality and vandalism that was developed by the World War exceeds anything known to history; yet it was all done in the name of civilization, science and culture. Compared to such destruction primitive life was a paradise and aboriginal man an angel. By the world's record man's last estate is worse than his first and what it may yet be, who can tell? Life does not need man's puny help and flourishes in spite of much inteference. In the last analysis life existed from the beginning and will work out its own destiny.

True greatness in man is inherent and cannot be manufactured or made to order. Great men usually have a humble origin and are self made. Although we do not know how Nature operates, we know that she is reliable and in every crisis of life the right man is always found to take command.

The Fresh Air Fiend

卐 AN ANOMALOUS PRODUCT of our modern civilization is the nondescript character known as the Fresh Air Fiend. He may be of either sex and is often a woman. He is altogether selfish and his one desire seems to be to please himself without the least regard for the comfort and happiness of others.

There is nothing better in life than fresh air and plenty of it; but all persons are not constituted alike and are often affected differently by the same treatment. What gives health and happiness to one may cause sickness and death to another. Because of this difference in people, it is necessary to consider the comfort of all without doing anyone an injury.

The winter season is the time of year when the fresh air fiend gets in his most deadly work. The cold blasts of winter afford an opportunity for doing the greatest damage and making everybody feel miserable. If the "fiend" would only herd by himself he could do no harm, but in our complex civilization it is impossible for anyone to live only for himself.

It is not merely the wanting of fresh air that makes the fresh air fiend such a terror, but his selfish and unfair method of getting it. Whenever he enters a room he immediately feels smothered and must have fresh air or die. Then, without asking "by your leave," he proceeds to open all the doors and windows, regardless of the state of the weather outside, or what effect the cold air drafts will have upon others who may be present in the room.

He acts without sense or reason and "hogs" it all as if he owned the earth; and the only way to successfully suppress him is to caress him with a club. It is no sign that a room needs ventilating just because the fresh air fiend says so; and if the room really needs it, there is a more sane and safe way of doing it than by his arbitrary method.

It is generally conceded that every living room, street car, church or public hall should be properly ventilated, but that is not always an easy thing to do without causing inconvenience and discomfort to some of its occupants. In every assembly of this kind there is always a variety of people present, and among them are some that are weak, invalid and old, who cannot endure a sudden or extreme change of temperature with impunity. If such persons are

subjected to drafts of cold air, particularly if they are in a state of perspiration, they are liable to catch a cold that may result in some serious sickness, or even end in death.

If there are any persons who deserve more consideration than others, it is those that are feeble and sensitive to changes. From a humanitarian standpoint, if for no other reason, the strong ought to be willing to help bear the infirmities of the weak. Health is of more importance than the gratification of any foolish whim or fancy.

Scenes of selfishness and ill-breeding are of common occurrence and may be seen almost daily on trolley cars. The modern street car is so constructed that a portion of the car is left open and another part is inclosed, which makes a combination that is well adapted to the health and comfort of the traveling public. By this arrangement those who want plenty of fresh air can get it by sitting outside where the wind blows, while the more delicate and sensitive can find protection from the wind by sitting inside the car.

But what does the fresh air fiend invariably do on boarding a car? Instead of taking a seat on the outside where he rightfully belongs, he marches

straight away inside the car and plants himself in a seat beside a window. He lets the door stand open behind him, as if he had been taught that doors were not made to shut, and opens every window wide to the sky, when the car is quickly filled with death-dealing drafts. By the general discomfort which he creates he makes himself an unmitigated nuisance and deserves to be put off the car. There should be a law passed to compel such a freak either to sit in his proper place on the outside, or, if he goes inside, to behave himself and act decently.

There is a great difference between ventilation and cold air drafts. Moving about or exercising in the open air, even when the wind blows, is less liable to produce a cold than when standing or sitting still in a draft. When proper ventilation is practised, there is an almost imperceptible movement of the air that is scarcely felt and does no harm; but to stand or sit in a cold draft before an open door or window is almost certain to result in a cold.

If anyone at a public meeting feels the need of fresh air and must have it, he had better leave the room and go home rather than open windows and doors indiscriminately, which would not only jeopardize his own health but also endanger the

health of the community by exposing those present to dangerous air drafts.

I once witnessed the opening of a window by a fresh air fiend that produced other than the usual effect upon a large congregation in a church. The building in which it happened was well aired and did not need ventilation. Soon after the service began, a member of the choir who had the habit and could not resist the impulse to do the wrong thing at the right time, arose and opened a window back of the pulpit, which let in a blinding stream of sunlight into the eyes of the congregation, that caused torture to the audience, all because of the stupidity of one man.

It has been said that nature abhors a vacuum. Perhaps the nearest approach to a vacuum would be a house, if it could really be made empty and air-tight, which it cannot, as it is filled with air, if nothing else, at all times.

By an act of diffusion air is present everywhere and in every house. It filters through every crack and crevice and circulates freely both inside as well as outside of a house, whether we aim to let it in or try to keep it out. The winds that blow, together with the expansion and contraction of the atmosphere

caused by variations in temperature, keep the air in motion and prevent its becoming stagnant and stale. Getting fresh air need not worry us in the least, as it finds and follows us wherever we go.

There are persons who do not understand the nature of air and imagine it is absent where it is present. They appoint themselves agents to regulate the air and make it their business to open doors and windows that are not their concern. Facts show that people who live in unventilated houses are just as healthy and live as long as those who live out of doors. I have observed its operation in both directions and have not been able to discover any difference. If it were not so we would not have to build houses but could live in the open like savages.

People get cranky notions on many subjects, but on none more than on air and diet. At one time, not so very long ago, night air was considered to be a deadly poison, presumably because of the dark (?), and futile efforts were made to keep it out of the houses. Just where to draw the line of demarcation between day and night air was difficult to determine, so the practice was abolished. Who cares whether we breathe day or night air, as long as everybody has to breathe both kinds of air, in order to live?

We have to take the atmosphere as we find it and cannot always pick our choice. Neither is the air always the same as it is liable to many changes. If there is any difference in quality, shut-in air should be purer and sweeter than outside air. As a result of our modern civilization, the air is often polluted and laden with impurities such as dust, smoke and noxious gases, that are both disagreeable and dangerous but which we cannot escape even when we take the utmost care to avoid them. It is so easy to "strain at a gnat and swallow a camel."

The following extract is taken from a book written by William T. Hornaday, our greatest living naturalist, on "The Minds and Manners of Wild American Animals," that is to the point:

"On this subject there is a strange diversion of reasoning power between the wild animals of cold countries and the sleeping porch advocates of today. Even the most warm coated of the fur-bearing animals, such as the bears, foxes, martins and minks, also the burrowing rodents, take great pains to den up in winter just as far from the 'fresh air' of the cold outdoors as they can attain by deep denning or burrowing. The prairie dog not only ensconces himself in a *cul-de-sac* at the end of a hole fourteen

feet deep and long, but as winter sets in he also tightly plugs up the mouth of his den with moist earth. When sealed up in his winter den, the black bear of the north draws his supply of fresh air through a hole about one inch in diameter, or less.

"But the human devotees of fresh air reason in the opposite direction. It is now the regular thing for mothers to open wide to the freezing air outdoors either one or all the windows of a room in which their children sleep, giving to each child enough fresh air to supply ten full-grown elephants or twenty head of horses. And the final word is the 'sleeping porch'!

"It matters not how deadly damp is the air with its 33 degrees of cold, or the velocity of the wind. The fresh air must be delivered. The example of the fat, heavily furred wild beast is ignored; and I just wonder how many people in the United States, old and young, have been killed or permanently injured by fresh air during the last fifteen years.

"And furthermore. Excepting the hoofed species, it is the universal rule of the wild animals of the cold winter zones of the earth that the mother shall keep her helpless young close beside her in the home nest and keep them warm partly by the warmth of her body. The wild fur-clad mother does not warm her

helpless offspring in an isolated cot in a room apart, upon a thin mattress and in an atmosphere so cold that it is utterly impossible for the poor little body and limbs to warm it and keep it warm. Yet many human mothers do just that, and some take good care to provide a warmer atmosphere for themselves than they joyously force upon their helpless infants.

"No dangerous fads should be forced upon defenseless children or animals.

"A proper amount of fresh air is very desirable, but the intake of a child is much less than that of an elephant. Besides, if nature had intended that men should sleep outdoors in winter, with the moose and caribou, we should have been furnished with ruminant pelage and fat."

The Pace That Kills

THE ARTIFICIAL LIFE of modern civilization has made great strides during recent years in what is known as progress, but at what a terrific cost of human life has it been brought about! Everything goes on with a rush and the wear and tear of living machinery is something frightful. The speed at which we live is surely the pace that kills.

The time was when men and women lived moderately and modestly and were happy in doing so. They obeyed nature's laws and lived natural lives. Their daily needs were simple and few and their reward was happiness and contentment. When we stop and think of those days and compare them with the life that is passing now, we are tempted to wish for a return of the simple life.

The things that have happened in the world's progress during the past century are truly marvelous and wonderful to contemplate. With the introduction of steam, gasoline and electric power came speed and a mad desire to move rapidly, do things quickly and accomplish great results. One invention after another was discovered to aid man in compassing time and space. But the speed craze does not stop

at machinery, which represents only the lower, material plane, but has also invaded the higher mental and moral spheres. From a pure desire to go steady and do right, man has accepted the speed idea along all lines without regard to consequences. His strivings have become more and more sordid and selfish, culminating in the one ambition to become immensely rich and causing him to drift far from his high ideals of honesty and integrity.

The popular craze is to amass wealth and to accumulate dollars in such numbers as to make fortunes that amount to hundreds of millions. Such a piling up of great riches is all wrong, even if it were done legally, as it destroys the balance of society and widens the breach between the rich and the poor. In this unnatural and unreasonable scramble for money, men have changed in many ways, but the one thing to be deplored most is the loss of honesty. The man who is out only for the almighty dollar has no conscience and will stoop to anything to accomplish his end. He does not hesitate to deceive his best friend if he can profit by doing so, and his methods for acquiring money are sometimes more reprehensible than those of the common thief. Men who occupy high positions commit such

acts of perfidy repeatedly and seem to think nothing of it. They have neither compunction of conscience nor feeling of pity for those they have ruined, and their only concern seems to be how to evade the law and keep out of jail. This crazy grasping after money leads to many evils and tends to form dangerous monopolies by the combination and concentration of large capital. Monopoly kills competition and competition is the life of trade. When a man accumulates millions, like Rockefeller or Carnegie, dollars that he does not need and cannot use, he puts out of business and impoverishes thousands of small traders and dealers. His money may eventually be given to charity but that does not help those who have been robbed. Any man who uses unscrupulous methods to increase his wealth, whatever his standing may be, is an undesirable citizen. To check this evil extravagance, a legal limit should be put upon the amount of money any one individual may acquire.

The poor laboring man envies his rich neighbor and is apt to think that he owes him a grudge and tries to get even with him for some real or fancied wrong, and joins a union that he may the more successfully combat his enemy when labor and capital

clash. Union bossism is just as bad as corporate greed. Each tries to take an unfair advantage of the other and get something for nothing. Both are wrong and no two wrongs can make one right. Unless there is a speedy return to sanity and honesty in business, the nation is in great danger of anarchy and ruin.

The advent of steam and electricity changed the speed standard. Prior to their use, man gauged speed by his own gait and had the right of way on all occasions. His standard of speed was slightly increased by the pace of old Dobbin, the family horse; that is now also taboo. The horse vehicle went out after the steam engine and trolley cars, the bicycle, motorcycle and automobile, and lastly the flying machine, came into use. The great speed of these various means of rapid transit on wheels, moving rapidly in every direction across the landscape, both on country roads and city streets, has caused such a confusion and menace to pedestrians that it is no longer safe to travel on foot and alone on any public highway. This increased speed was perhaps inevitable as a factor of modern progress, but the large toll of life that it exacts is appalling.

To adequately meet the new requirements of speed and make it reasonably safe, a school of instruction is necessary for people to attend, to re-educate the senses and fit them for existing conditions. The great change which has been made from slow to rapid motion by the new methods of travel makes it imperative for people to modernize and readjust themselves to the new order of things. This is more easily said than done as it is about as hard to unlearn the old as it is to learn the new. Particularly is this true of old people who are apt to take too much for granted and do not take kindly to changes. They are naturally inclined to fall behind in the race with time and the progress of events and, more than ever, need to use caution. With advancing years, too, the senses become dulled and thus old folks fail to notice the things that pass by as they once did in youth. Even after every precaution has been taken, it is sometimes impossible to escape the rush of vehicles, and the helpless victim is caught and ground beneath the wheels of the modern juggernaut.

It behooves everyone who travels to heed the warning sign at the railroad crossing to "Stop! Look!! Listen!!!" and then wait some. First be sure you are right and then go ahead.

Bird's-eye view of the Munk cattle ranch in Railroad Pass, Wilcox, Arizona

The Munk Cattle Ranch

WHEN THE MUNK BROTHERS located their cattle ranch in Arizona in 1882, it was in the days of free grass and the open range upon the Public Domain. It was also during the years of Apache strife, when human life was very uncertain in that dangerous country. Except for the presence of hostile Indians, conditions seemed to be favorable for doing a successful cattle business, and we went ahead on the saying, "Nothing ventured, nothing gained."

Railroad Pass, where the ranch is located, was named by Lieut. J. G. Parke, back in the fifties, while he had charge of a surveying party to find a practical route for a railroad to the Pacific Coast. Its long, gentle slope and easy grade made it desirable for such an enterprise, and the Southern Pacific Railroad was built upon this route in 1880.

The Pass is bounded on the east by the San Simon Valley, on the west by the Sulphur Spring Valley, on the south by the Dos Cabezas Mountains, a spur of the Chiricahua Range, and on the north by the Graham, or Pinaleño Mountains. It lies in the heart of the Apache country that was once the home and the

hunting ground of one of the most savage and ferocious tribes of Indians that ever lived. The three great chiefs of the Apache tribe were Coloradas Mangas, Cochise and Geronimo, who, with a score or more of minor chiefs, kept the country in a state of terrorism for many years.

Indian trails crisscrossed the country in every direction, but led mainly north and south from the Apache stronghold in the Mogollon and Chiricahua Mountains, down into Mexico, where the Indians made frequent forays to replenish their supplies, and to steal horses and cattle. After the United States took possession of the country, the Government built a chain of forts that extended from the Mexican border, north, into the Mogollon and White Mountains. These forts were named Huachuca, Bowie, Grant, Thomas, San Carlos and Apache, which since the war have been abandoned or converted to other purposes. The forts or posts were established for the use of the frontier army to fight the Indians and to protect travelers and settlers who came into the country.

At that time the land was thinly settled because of its savage scourge. Some farms and ranches were started in the valleys and a few hardy prospectors lived in the mountains. Houses were few and far

between and distance was seemingly endless. Everything was yet primitive and new and nature unspoiled. A horseman could ride all day long in any direction without meeting a single soul or seeing any house or fence.

The grass stood knee-deep everywhere and was stirred into rippling waves by a gentle breeze over a broad meadow, as far as the eye could see. Game of all kinds was plentiful and roamed the plains and mountains unmolested. After the cattle came, deer and antelope sometimes mingled with the herds and grazed as tame and contented as if nothing new had happened. There was plenty of grass but water was extremely scarce. The land looked inviting but from lack of water was unoccupied. Seeing the beauty of the place and the abundance of grass everywhere, it was decided to locate the ranch on this favored spot, and take a chance on finding water.

We located our first camp in the foothills of the Dos Cabezas Mountains where there was plenty of grass and wood. In looking about to see what more we could find, we discovered several small springs and wet weather brooks, that furnished sufficient water for present needs. To our great disappointment, these water sources proved to be active only

during the rainy season and soon dried up. Several wells were dug in the hope of striking a permanent flow of water, but without success. Under these discouraging circumstances it appeared as if a ranch could not be made there. No chain is stronger than its weakest link, and even with plenty of grass but no water the cattle would have to perish.

However, not to be thwarted in our purpose, like others who, we were told, had failed when they started on a similar quest, further diligent search in a new direction resulted, fortunately, in the discovery of an underground spring that came near the surface but did not flow on top of the ground. Here a fine stream of water was encountered at a shallow depth by digging. Getting such a flow of water out of perfectly dry ground seemed like a miracle and was as surprising as making water gush from a rock by striking it with a stick, as is told in fairy tales.

The big spring is located at the point of the Pinaleño Mountains, on the north side of the Pass, and fully twelve miles distant from where the search for water first began. It is one of the largest and best springs in that entire region, and furnishes an ample supply of water for every ranch need. The weather never affects it, neither does its flow ever

change; and it has watered thousands of head of stock in the driest seasons. Its unvarying, steady flow and unchanging temperature of seventy degrees Fahrenheit throughout the year, denotes that it comes from a deep and far off source to acquire these qualities. The water is perfectly pure and as soft as rain water. It is a wholesome beverage and suitable for every purpose.

Upon the hill above the spring is found plenty of evidence to show that the place had once been inhabited. There are no structural ruins but quantities of arrowheads, stone axes, metates, rubbing stones and broken pottery have been found, to show that the place was once occupied. It must have been a favorite resort for the native tribes in their migratory wanderings long ago. From some unknown cause the spring became covered up and lost and was rediscovered as described.

Here the ranch buildings and corrals were located and have been the center of ranch activities ever since. As the ranch covered a wide territory, other lesser outlying camps were made near springs, and water holes where storm water collects in ponds during the rainy season. Each of these camps has a small cabin and corral that is used by the cowboys

when absent from the home ranch on emergency work, or for rounding up and branding calves.

In the beginning, when the work was not pressing, and while we were awaiting the arrival of cattle, the men who were idle went into the hills prospecting for gold, to kill time. One of the men who had dug himself into a hole, hearing a noise above his head looked up and saw several Indian faces peering down at him. His unhappy fate might have been sealed then and there but by good luck it happened that the uninvited guests were a detail of friendly Apache scouts who were under the command of an army officer, trailing some broncho bucks who had left their reservation without permission, and were on their way to Mexico. The man was badly scared but the adventure ended without any harm being done. Incidents that are either amusing, serious or tragic are liable to happen at any time during the regular routine of ranch life.

The original range cattle were known as Longhorns, on account of their enormous headgear. The horns frequently measured from five to six feet across from tip to tip, and were certainly fierce looking and dangerous in a fight. They were native wild cattle of an inferior grade, brought in from Texas

and Sonora, and were the only kind of cattle obtainable at that time. They were desert bred and accustomed to an arid climate. They had much of the nature of a camel and could exist on little food and water. A little of this kind of blood is desirable in range cattle as it enables them to rustle a living while others perish when grass and water are scarce. These cattle have been graded up by importing pure bred bulls of new breeds, mostly Shorthorns and Herefords, until the scrub element has been nearly bred out. Herefords, or White Faces, as they are commonly called, are now the prevailing type of cattle that is seen upon the ranges of the Southwest.

Being country bred and somewhat familiar with farm life, we were, nevertheless, tyros in the range cattle business, but willing to learn. Our method was to begin in a small way at the bottom of the ladder and gradually work up as circumstances and experience would dictate. This plan was strictly followed from the beginning, and proved to be right, as it resulted in success.

Our first purchase of cattle was obtained under difficulties. The only cattle that we could find were of poor quality, high priced, far away and hard to bring home. A cattle boom was on and everybody

wanted to get into the cattle business at the same time. As Mexican cattle were the nearest that we could get, we made our first purchase from the J. H. Slaughter San Bernardino ranch in Sonora, just below the border. They were of the usual Longhorn variety and were as wild as deer.

The market price of a scrub cow at that time was thirty dollars, with the calf thrown in if there was one. The herd which we bought numbered two hundred head, to which aggregation was added a remuda of twenty-five cow ponies, for driving the cattle home, a distance of one hundred miles, over an open country. The creatures were very wild and not easy to drive or locate on their new range. After considerable trouble, we succeeded in getting them home, yet, notwithstanding that they were close herded for a time, some of them got away and returned home to their former range. We gave the renegades a hot chase and captured some of them, but a few head were lost that we never did find. Once cattle get accustomed to a range, they become contented in their new home and will not stray very far away. This herd was bought in 1883 and another like it in 1884, also from the Slaughter ranch and upon the same terms.

From that time we bought and sold cattle whenever more were needed or there was an opportunity to sell. The steers, when sold, were gathered and shipped usually in train loads to northern pastures and feed lots in the corn producing states, where they were matured as beef for the eastern market; while the cows and heifers were kept for breeding purposes to increase the herd. In this manner the cattle were constantly being changed and their quality improved. The southern country has a mild, warm climate that is favorable for breeding stock, in which industry Arizona excels.

When the market was dull and sales slow, a surplus of cattle was certain to accumulate and overstock the range. Too many cattle made a shortage of feed, when a part, if not all, of the herd had to be moved to a new range or disposed of by any method that would insure their safety. When the country was first opened to cattle during boom days, so much stock was rushed in to graze that the range was soon overloaded and all of the grass cleaned up. The men who saw the grass covered plains in the early days of grazing, had no thought that the grass could ever entirely disappear under cattle any more than under the buffalo, but that very

thing happened and to the surprise of everybody. After the hard lesson of overstocking was learned, the ranch men were more careful not to let their herds grow to an unwieldy size, but sold their surplus cattle at any price they could get in time to prevent a catastrophe.

Our one serious loss of cattle was from this cause during the early nineties of the last century when there was a succession of several dry years. All kinds of feed was short and the range heavily overstocked. Without grass, water could not save the famished cattle, and as there was no way out of the difficulty, many cattle had to die. The feeble old cows came straggling in to water after a long journey in search of a little grass, looking thin and starved, and were too weary and thirsty even to drink after they arrived at the spring. They lined up in a row at the water trough, which was always brimful and overflowing, touched their muzzles to the water and drew their heads back with a jerk, as if contact with the water hurt their mouths. This performance was repeated many times before they began to drink in earnest. After getting fairly started, they settled down with great gusto to a long steady draught on the water, until they were full to bursting. As they

continued to drink, their flat, empty sides gradually swelled out and grew round like a barrel. By the time they were ready to quit drinking, they had acquired such a load of water that their weak legs gave way under the weight, and they sank down in their tracks to rise no more. Whenever a cow got down on her side in this fashion, she was helpless and unable to rise again; neither could she be helped up to stand on her feet but expired where she fell. Carcasses dotted the corral like a shamble and were dragged away into a side canyon, to add more costly but useless raw material to the bone yard.

At that time our range was carrying several thousand head of cattle and the loss was heavy. After the stress was over the decimated herds could have been counted by hundreds instead of thousands as formerly. The loss of cattle was general, which discouraged the ranchmen so much that they were as anxious to get out of the business as they had been eager to get in only a few short years before, and many of them did quit. But we stuck, and by staying found out later that our loss was not as serious as it seemed to be when it happened, and the difference was soon made up by the natural increase in the herd.

Every staple industry has its lean and fat years, which is likewise true of the cattle business. At a time of depression it is necessary to hold on and wait for the return of better days. By a natural law of compensation, there is bound to be a reaction after every period of depression, and by exercising faith, courage and perseverance prosperous days are sure to come back.

Although cattle will sometimes fatten on the open range, it is only during an exceptionally good season that this can be done with certainty, when there is plenty of rain and an abundance of green grass. All of the old grass disappeared years ago and it now happens only rarely that any of the new grass holds over from one year to another. The only grass that is now available is what grows each year, and even this supply is not always dependable as the rainy season is variable, regional and uncertain. Rain may be abundant on one section of the range and entirely absent in another region, yet both within sight of each other. For this and other reasons, it is always difficult to guess what the year will bring forth in the range country. Even with a scant growth of grass, the cattle will manage to pull through the year as the gramma grass is very nutritious and a little of it

will go a long way, especially if it is reinforced by browse from the mesquite bushes. However, the necessity of taking a chance occurs frequently in the range cattle business. There is seldom any hand feeding done as it is too expensive and the cattle are expected to find their own living or starve.

The cattle on neighborhood ranches naturally get mixed up, running together upon the open range, and need identifying marks to distinguish them. For this reason every ranch has its separate earmarks and brands to enable the rancher to know and claim his own. Another difficulty in range work is that when cattle are running wild they cannot be counted as accurately as when they are in an enclosure. A range count, as it is called, is equal to a rough guess. Keeping tally of the calves that are branded during the year and multiplying the number by three, is as nearly a correct count as can be made in a general estimate.

The profit of a herd depends largely upon the size of the calf crop, although an increase in the price of stock cattle also helps some. The steers are usually sold as yearlings but some of the youngsters are apt to escape in the first roundup and are picked up again at some future time and counted as "twos"

or "threes," according to their age when sent to market. For many years the average price of a yearling was fifteen dollars, but the selling price has dropped as low as six dollars, and, again, has risen as high as forty dollars.

Our fixed rule, from which we have never deviated, is not to ship any stock until it is sold and to sell only to buyers in the field, who will contract sales for delivery upon a fixed date. If there are no buyers out, the cattle are held in pasture, to go over until the next season, or to die if they must, for want of feed. Sales are usually made at so much per head for yearling steers, with an additional five dollars for "twos" and ten dollars for "threes."

At the time of gathering, the cattle are required to be in good shipping condition, and delivered on a designated date at the nearest shipping station on the railroad. After they are loaded into the cars, the new proprietor takes charge.

During recent years many changes have taken place in the range country. Much new land has been surveyed and laws have been passed to regulate the buying and leasing of public land. Many settlers have also come in and located homestead sites which

they are trying to farm, without much success; but the bulk of the land is owned or leased by the cattle men. The old style of ranching has ceased and is a thing of the past. A few small ranches continue to operate but the large ranches have nearly all disappeared. The few that remain have reduced their herds and made other changes to meet the requirements of the new regime. Practically all of the land is fenced, with the owner in possession.

The old timers, who were familiar with the arid conditions of the range, never dreamed that any such changes could ever take place, but they are an accomplished fact. What the nestors will be able to do with the land is yet to be seen. Pioneering in any new country is always attended by difficulties, and on the desert where the hardships are particularly trying the experiment is extra hazardous. Farmers must have water to grow their crops, and in a land that is almost rainless and waterless the prospects are not flattering. However, there are always optimists who are ready to experiment and are willing to take a chance on anything that is offered. It is this small band of brave and courageous men and women who have thus dared, that has pushed back

an unpromising frontier across a continent, reclaimed a vast wilderness, and blazed the way for our modern civilization.

In past years our range extended to the horizon in every direction, but is now limited to a fenced pasture that is seven miles square. It is capable of supporting approximately one thousand cows and their increase, which in these piping days of high taxes and cost of living is enough to worry about.

A system of iron pipes, cement reservoirs and water troughs has been installed, which carries the water direct from the spring into each one of the half dozen pastures, so that the cattle can drink whenever they get thirsty.

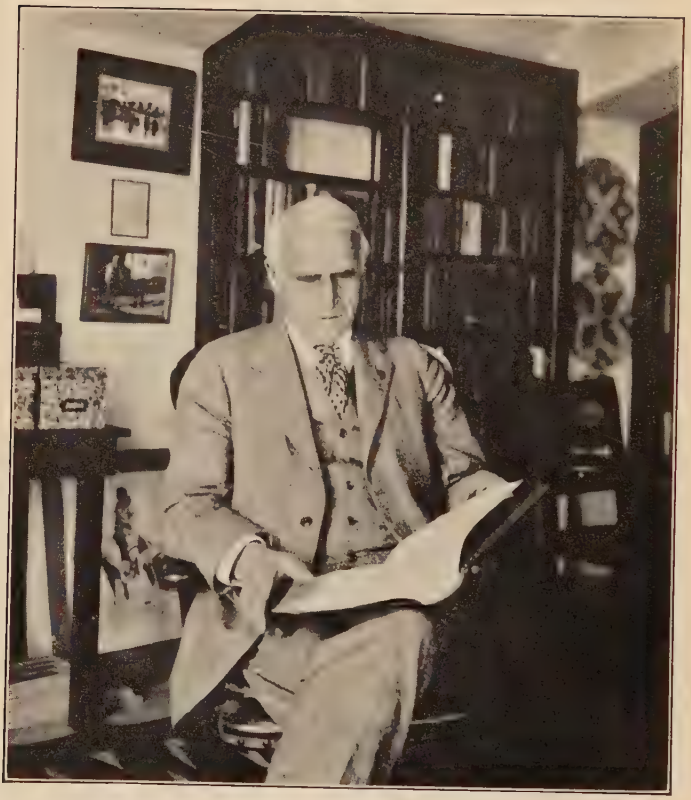
Having the herds segregated and under control in fenced pastures has an advantage over the open range, in that it simplifies the ranch work, gives the cattle better care, and requires fewer cowboys to do the work. Another very desirable feature is that the owner can give the ranch his personal attention, and is independent of selfish neighbors and arbitrary cowboys.

In the fall of 1918, we held our last open range round-up, which was attended by the usual variety

of incidents that go with such a gathering. Sixteen cowboys participated in the event and kept things moving lively. One day one of the men on dismounting threw his belt and gun upon the ground, when the revolver exploded and shot a bullet through his arm. Another man, while riding full tilt after cattle, was thrown from his horse and had his collarbone broken. Such accidents are liable to happen almost any day in ranch work.

It has always been a custom of the range for cowboys to carry revolvers, presumably for self-defense in an emergency. Some of them were quite expert with a gun and were known as gunmen because they were "quick on the draw." In the early days when the country was new and wild, it was necessary to go armed, but that excuse no longer exists. It is a useless and dangerous practice for a man to carry a gun and the habit should be abandoned. More harm results from the careless use of firearms than from any other accident. In all of my travels through the Indian country I never carried a revolver, and a rifle only a few times when there was grave danger from Indians, when the hostiles were out on the warpath raiding the country.

After the fighting Apaches were subjugated and outlawry on the frontier suppressed, the necessity of carrying firearms became obsolete; and with them departed the glory of the gunman from the "wild and woolly west."



Dr. Munk in his Arizona Library, Southwest Museum

The Munk Library of Arizoniana*

THE PLAN for collecting a library of Arizona books was not premeditated but was purely accidental, and due to my visiting a cattle ranch in 1884.

The ranch is located in Railroad Pass in the mountainous region of southeastern Arizona, which is in the heart of the Apache country. At the time of my visit hostile Indians were out on the warpath and the frontier army was busy running them down. Everything was new and strange and I was greatly interested by what I saw and heard. The trip furnished the opportunity to see more of the Far West, which was my dream from childhood. Stories of the woods and wilderness, of wild animals and wilder Indians, always fascinated me and I was eager to see for myself the things of which I had read.

After seeing Arizona, I found it so interesting that I was consumed with curiosity to learn more about the country. When I returned home, I immediately

* The historical data for this article were compiled by the Librarian, Miss Adelaide Chamberlin.

began to acquire all the books that I could find describing it. My one surprise now is that after having made the start and with no definite purpose in view, I have continued without pause during the past forty years collecting Arizona books, which has resulted in the assembling of a unique library.

The Southwest has the oldest white civilization in America and had a culture of its own when the white men found it. The country was sparsely populated by sedentary Indians who lived in pueblos and followed farming. They are a peace loving people and disinclined to wage any aggressive warfare, but are valiant defenders of their homes.

Geographically and historically, Arizona is in the center of this culture of the Great Southwest, which also includes New Mexico, Colorado, Utah, California and northern Mexico; and most of the books which touch that region are related to Arizona.

The attractive scenery and valuable resources of that country, together with its early discovery and occupation by the Spaniards, make it an important storehouse of historical lore that has caused it to be written about more than any other portion of the United States. It is the purpose of the library to gather all of this source material that can be found

and make it available to students and scholars for the benefit of mankind.

Four hundred years ago the Spaniards first discovered and explored the Great Southwest. At various times Spain sent out expeditions to conquer, colonize and Christianize the natives of that vast region. All of these expeditions served in the name of the King of Spain and were supplied with missionaries whose duty it was to save the souls of the heathen. Each company had its own scribe who reported their travels and discoveries in detail, and these reports are preserved in the Spanish Archives.

This literature embraces an interesting and valuable record of events which goes back to near Columbian days and prior to Coronado's great march, to an expedition that was sent out from Spain in 1527 under Panfilo de Narvaez to conquer the Province of Florida. That event, though seemingly disconnected, is the real origin of Arizona history and the basis of our literature.

The Spanish flotilla of five ships with about six hundred souls on board reached the Florida coast nearly one year later, when three hundred men were landed to explore the country. The ships were ordered to follow along the coast to an agreed

rendezvous at a harbor called Panuco. After fruitless wanderings and great hardships, the reconnaissance party returned to the coast to find no harbor or vessels waiting there. In their almost helpless condition they contrived to piece together five barges on which they embarked on the twenty-second of September, 1528, to hunt the missing ships. Terrific storms soon separated and destroyed the frail craft. Two of the largest were driven ashore on Galveston Island, near the Texas coast, where the men were made captives by the Indians.

After six years of captivity, the sole survivors, namely, Alvar Nunez Cabeza de Vaca, Andres Dorantes, Alonzo del Castillo Maldonado and an Arab Moor, Estevanico, succeeded in making their escape in 1535, and under the leadership of Cabeza de Vaca started westward on foot, posing as medicine men. This isolated band of intrepid adventurers traveled through the then unknown country of Texas, New Mexico, Arizona and Sonora to Sinaloa, where they arrived during the summer of 1536. Cabeza de Vaca made his report to Melchior Diaz, Chief Alcalde, in which he related how they had heard of some

strange people who lived in large cities built of stone, that contained much treasure.

As there is nothing of record that tells us about their exact route and the travelers furnished no definite information on the subject, there has always been a difference of opinion among historians as to what route they followed on their long overland journey. As there was no made road to guide them nor any description of their route to be had, we can only judge of their course by what we know confronted them.

They were anxious to find some of their countrymen but knew of none nearer than Culiacan, Mexico, which was somewhere in the direction of the Pacific Coast. To reach their goal they would have to take a western course, which they could change if necessary by deviating either to the right or left of their line of march, as circumstances might dictate.

They must have received some information about the country from the Indians with whom they mingled and doubtless also made some observations of their own as to directions and the contour of the landscape. Wild Indians, like wild animals, are apt to find the

best roads and make their trails on the lines of least resistance. Some such trails our travelers must have found and followed as they invariably lead to springs or running streams where water could be obtained, which was a desirable factor in that desert country.

The entire trip could not be mapped out from the start but had to be discovered in sections as they proceeded and were guided by what they saw and heard. They must have received information from their friendly hosts about the impassable mountain barrier of the Sierra Madres of Mexico, which extend south from the Gila River to the City of Mexico, and prevented them making any short cut in that direction. North of the Gila River were other high mountains that did not interfere with their journey as they were in the opposite direction from their objective.

If they had made a long detour to the north, they would have met the Pueblo Indians and seen their stone houses, but nothing of the kind happened or else they would have reported it. All that they knew about the Pueblos was what they had heard and not what they had seen as they had seen nothing.

As they did not cross the high mountains to the south and did not detour to the north, nor visit any of the Pueblos, they must have followed nearly in a

straight line as far west as Nogales, on the Arizona-Mexico border. There they were able to circumvent the mountain barrier by passing around its base. After that they turned south and traveled over a more open country where they readily found the road that took them to Culiacan, their land of "heart's desire."

At the suggestion of Coronado, the viceroy of New Spain, Antonio de Mendoza sent Fray Marcos de Niza to the north to ascertain the truth of Cabeza de Vaca's report. He left Culiacan March 7, 1539, accompanied by Estevanico and some Indians, with orders to send back accounts of what he saw. Soon emissaries came back telling of Cibola; and Niza followed day by day in the footsteps of his scout. Early in May news was brought that Estevan had reached Cibola and tried to enter against the wishes of the inhabitants, who then killed him. Niza advanced until he could see Cibola in the distance, when he took formal possession in the name of the King of Spain and returned by heavy marches, reaching Mexico City in September, 1539.

As a result of Niza's accounts, Francisco Vasquez de Coronado organized his expedition and left Compostela, New Galicia, February 23, 1540. At Culiacan, Coronado reorganized his company and

marched north through Arizona in search of the famous Seven Cities of Cibola, which they found not in palaces of wealth, as they expected, but in the poor adobe huts of ancient Zuni. From Cibola parties under Pedro de Tovar and Garcia Lopez de Cardenas were sent out to explore the country towards the northwest, where they discovered the Hopi villages and first saw the Grand Canyon.

The army spent the winter at Tiguex, near the site of the present Albuquerque, and in the spring of 1541 pursued their journey to Quivira, which was found to be a village of Wichita Indian teepees, not far from Great Bend, on the Arkansas River. Not finding anything worth while to reward their efforts, they returned home poor in pocket but rich in experience.

From that time on there has been an unbroken chain of exciting events in the history of Arizona and New Mexico that has caused the making of many books.

Hernando de Alarcon was the first navigator of the Colorado River. He was sent in command of several ships to explore the northwest coast of Mexico at the same time that Coronado went in search of Cibola, which was supposed to be on or near a

large body of water. He started from Acapulco May 9, 1540, and followed the shore until he reached the mouth of the Colorado River. His sailing vessels were unable to proceed, so with twenty men and two small boats he started upstream August 29, 1540. After a journey of fifteen days, they returned to their ships, having heard from the Indians that Coronado had reached Cibola.

In the following month, with replenished supplies, Alarcon made a second up-river journey. This time he went as far as the Grand Canyon where he left letters buried in a sealed jar under a tree, telling how he was unable to proceed. After having waited many days for news from Coronado, he returned to New Spain, explaining that the Gulf of California was a bay and not a strait as had been supposed. These letters were found by Melchior Diaz whom Coronado had sent westward from Corazones with a small party to find the ships. Diaz crossed the river and finding only a desert beyond, turned back to Corazones, but died on his way there.

Fray Augustin Rodriguez, accompanied by two priests and eighteen men, set out from San Bartolome, Chihuahua, June 6, 1581, for the land which they named New Mexico, and founded the first mission

at Puaray. The soldiers under their captain, Francisco Sanchez Chamuscado, searched for gold and discovered the first silver mine. They refused to go farther with Rodriguez and his two companions and returned to Mexico City in May of the following year. Rodriguez and the two priests remained at Puaray where they were all killed by the Indians.

Late in 1582, Antonio de Espejo started from Santa Barbara, Chihuahua, with a small party financed by himself, to go in search of Rodriguez and the two priests, of whose desertion by the soldiers of their party he had heard. When his expedition had passed Isleta, he learned of their murder. Then Espejo decided to make some brief explorations on his own account before returning to Mexico. With two men he for two days traveled east into the buffalo country. Then he went up the Rio Grande and westerly with his whole command as far as Zuni. From there Espejo with nine men traveled as far west as the Hopi villages. He estimated their population as 50,000, which was probably an overestimate. The expedition returned by way of the Pecos River, through Texas, reaching Santa Barbara, September 20, 1583.

With about one hundred and thirty soldiers, ten

Franciscan friars and a number of colonizing families, Juan de Oñate started from San Bartolome January 20, 1598, for New Mexico. He crossed the Rio Grande below El Paso in May and formally declared New Mexico to be a part of the Spanish kingdom. Moving up the Rio Grande to its junction with the Chama, he founded the town of San Gabriel de los Españoles, the second oldest town in the United States, in the fall of 1598. He traveled to Acoma where he put down a revolt. In 1605 Oñate founded Santa Fe. In 1608 he was superseded by Pedro de Peralta, the second governor of New Mexico.

In 1621, the Franciscan Missions, which claimed 16,000 converts, were organized as the Custodia of the Conversion of Saint Paul, and Alonzo Benavides came as the first custodio, with twenty-seven friars. He was a tireless worker and made a lengthy report as to the people and provinces of New Mexico in 1626, when he was recalled to Mexico. This report was transmitted by the Commissary-General of the Franciscans in Mexico to King Philip IV and printed in Madrid in 1630.

As the result of ever increasing oppression of the Indians by the Spaniards, on August 10, 1680, following the plan of a Pueblo Indian, Popé, the Pueblo

towns revolted and about four hundred Spaniards were massacred in the outlying pueblos. At Santa Fe, which had been made the capital of New Mexico in 1605, nearly 2,000 people, including one hundred and fifty-five soldiers, assembled to resist the attack of the Indians. On August 19, the Spaniards made a sortie and captured forty-seven Indians, who were executed on the plaza. The next day, however, they were forced to evacuate the town and this the Indians allowed them to do, following them for seventy miles, to be assured that they were really leaving the country. The refugees made winter quarters about thirty miles north of El Paso, at San Lorenzo, from which point most of them later made their way to the settlements in Chihuahua. Twenty-one Franciscans are said to have been killed and all evidence of their enforced religion destroyed.

In 1681, Antonio de Otermin, then Governor of New Mexico, organized an unsuccessful attempt to regain with a force of about two hundred soldiers the country from which he had been forced to retreat the year before. From this time on, until 1692, the various governors made a series of expeditions against the Pueblos but did not succeed in a permanent

occupation. Popé retained supreme authority over the Indians until he died in 1688.

On August the twenty-first, 1692, Diego de Vargas, appointed by the viceroy of New Spain to the task of reconquering New Mexico, left El Paso with two hundred soldiers and one hundred friendly Indians. He reached Santa Fe in twenty-three days and was able to enter the city peaceably, promising pardon to all who gave allegiance to the church and king. This he did at all of the Pueblos and then went back to El Paso to collect the people who were to re-colonize the country. Not until October 13, 1693, did this large company start for New Mexico, and when they arrived at Santa Fe, in December, their occupation of the city was opposed. A fierce battle was fought in which the Spaniards were at last victorious. Sporadic hostilities continued for over two years more in the Pueblo country, but in 1696 the re-conquest was complete.

In 1696 De Vargas was succeeded as governor by Pedro Rodriguez Cubero, who held him prisoner under charges in Santa Fe until July, 1700, when he left for Mexico to seek redress. The king appreciating his services, re-appointed him as governor and

in 1703 he returned to Santa Fe. April 14, 1704, he was killed in a foray against the Navajos.

Padre Kino, an Austrian by birth, was sent from Mexico in 1687 to work among the tribes of Pimeria Alta. In this year he established the Mission of Nuestra Señora de los Dolores about one hundred miles south of Tucson. This mission was his headquarters for twenty-four years of exploration work. From this base he established a number of missions in the valleys of the Magdalena and Altar, crossed the Sonora line and founded San Xavier del Bac in 1700, and within the next two years Guevavi and Tumacacori; several times explored the Gila River country, twice he descended the Colorado River below the mouth of the Gila, once crossing into California and once reaching the Gulf in an attempt to prove whether California was an island or a peninsula.

Kino died in 1711 and for more than twenty years no Spaniard is known to have entered Arizona. A tireless worker and traveler, Kino is said to have baptized more than 48,000 Indians, but he left no permanent results although twenty-nine missions and seventy-three Indian pueblos were founded in what is now Sonora and Arizona by him and his mis-

sionaries. Padre Juan Maria de Salvatierra was intimately associated with Kino in this work which was carried on by the Jesuits. Father Kino's manuscripts were lost for two hundred years in the Spanish Archives and were only recently found and translated by Herbert E. Bolton. It was a fortunate discovery as it fills an important hiatus in early Spanish history.

After the expulsion of the Jesuits in 1767, fourteen Franciscan missionaries were sent from Mexico to take their places at the request of the Marquis de Croix. Among them was Padre Francisco Garcés who was assigned to San Xavier del Bac, arriving there June 13, 1768. From there he made extensive pilgrimages. In 1769 he entered the Apache country and observed the various nations. In 1771 he went to prepare the Indians for the future founding of missions and, in visiting the Yumas, followed the Colorado River to the sea. He went with Captain Anza on both of his expeditions to California and afterwards started north from Yuma and traveled as far east as the Hopi villages, returning to San Xavier September 17, 1776. In August, 1779, he was ordered to go to the Colorado River where, at the

mission of Puerto de la Purisima Concepcion, the present site of Yuma, he was killed by the Indians on July 19, 1781.

Juan Bautista de Anza was born at Fronteras in 1735 and entered the army in 1753, taking part in many campaigns against the various hostile Indian tribes. Later he commanded two memorable expeditions. On January 8, 1774, he left Tubac with thirty-four men, including Padres Garcés and Diaz, for the purpose of finding a suitable road from Sonora to Alta California, for the use of future colonists. On March 22, he reached San Gabriel, California, having proved the existence of a practical route, and made this difficult march without losing a man. Diaz and Garcés were really the chief guides, Diaz having made the same journey three years before. From here he went to Monterey and from there returned to San Gabriel and Tubac.

Anza's second expedition was organized at San Miguel de Horcasitas, Sonora, September 29, 1775. Padre Font, then in charge of the Mission San Jose de los Pimas, was detailed as spiritual adviser. Padre Garcés and Padre Tomas Eixarch were directed to accompany the expedition as far as the Colorado. They all started from Tubac, October

22, 1775. In the party were two hundred and forty persons, including the families of the colonists, soldiers and some Indians, with one thousand domestic animals. Garcés and Eixarch remained with the Yumas on the Colorado, while the main expedition went on and reached San Gabriel in January, 1776. With an advance party including Padre Font, Anza went north along the coast, and on March 28, founded San Francisco, turned over the colonists to Lieut. Moraga, and with Font and a considerable force started back. Padre Font is remembered particularly for the numerous well-drawn maps he made while traveling.

In June, 1775, Padre Silvestre Velez de Escalante, a New Mexican Franciscan father, spent eight days in the Hopi towns, trying to learn of a road from Santa Fe to Monterey by the regions of the north. His report influenced the governor of New Mexico, Pedro Fermin de Mendinueta, to assist the Franciscans in an attempt to discover such a passage the following year. With an escort of nine soldiers, Padre Escalante and Padre Francisco Atanacio Dominguez set out from Santa Fe July 9, 1776. Traveling in a northwesterly direction, they reached northern Utah, discovering a large lake which they named

Lago Salado (Salt Lake), a name it bears to this day. They returned by a circuitous route through Arizona, crossing the Colorado River by swimming near the site of Yuma, visiting the Hopis and Zunis and reaching Santa Fe, January 2, 1777.

This rather lengthy outline of the history of the Southwest is given to show how numerous were the activities of the Spaniards in settling New Mexico and Arizona, and to indicate the rich mine of literature that is available to students and historians of our country.

Original old books of Arizona are few and hard to find and even some of the more recent ones have become scarce. Only a few of the rarer items that are found in the Munk Library of Arizoniana are here mentioned. De Torquemada's "Monarchia Indiana" was published in Madrid in 1723. The work consists of three large quarto volumes bound in vellum, each containing an elaborately engraved title page. Other books of an early date are Benavide's report, printed in Madrid in 1630, and now obtainable in several English editions; Heylen's "Cosmographie, containing the Chorographie and History of the Whole World," London, 1617; Herman Moll's "Complete Geographer," London,

1709; De Herrera's "History of the Vast Continent and Islands of America," an English edition, translated by John Stevens and printed in London, in six volumes bound in calf, in 1725; Miguel Venegas' "History of California" (includes Arizona), with maps and illustrations, two volumes, London, 1759; De Page's "Voyages autour du Monde," three volumes, Berne, 1783; Alcedo's Diccionario Geografico-Historico," five volumes, Madrid, 1786; Reynal's "History of the East and West Indies," eight volumes, London, 1788; De Humboldt's "Nouvelle Espagne," five volumes, Paris, 1811; Malte Brun's "Universal Geography," six volumes, Philadelphia, 1827. These are only a few of the many old and valuable works in this collection of books.

Until the middle of the nineteenth century, Arizona was a part of New Mexico and the history of one is the history of both. Soon after the year 1800, American adventurers began to drift into Mexican territory in the capacity of explorers, trappers and traders, and it was not long before a considerable commerce was established between the two nations. Santa Fe being the nearest town to the American outposts and the largest and most important city in the Southwest, naturally became the goal of

all western wanderers. These were soon followed by many settlers after Uncle Sam took possession of the land in 1848.

William Morrison of Illinois, was the man who started the Santa Fe trade in 1804, by sending Baptiste La Lande, a French creole, there with a small assignment of goods. Attracted by the country, La Lande sold the goods, appropriated the money to his own use and remained in Santa Fe. James Purcell of Kentucky was the second arrival, in 1805. He was driven into Santa Fe by the Indians from a trapping expedition, and his outfit wrecked.

Glowing accounts of the marvelous richness of the Far West soon traveled east and sent many adventurous spirits, both men and women, into the Rocky Mountains. As a result of the spreading of these stories, the Government sent its first exploring expedition into the Southwest under Lieut. Zebulon Pike, in 1806. His instructions were to examine the country that was tributary to the Arkansas and Red Rivers and to establish friendly relations with the Indians living there. From that time on emigration followed rapidly into the west and many new enterprises started.

To William Becknell belongs the honor of being the founder of the Santa Fe trade and the founder of the Santa Fe trail. His was the first successful trading expedition to Santa Fe and he was the first man to take wagons over the route that was later followed.

Among the notable men of the early days were Sylvester and James Pattie, father and son, from Kentucky, who left St. Louis with a trading caravan in the summer of 1824, headed for Santa Fe. There they obtained permission from the Spanish governor to trap for beaver on the Gila River. They spent five months in this occupation and were very successful, but the Indians stole their furs. For a time they worked the Santa Rita copper mines but were forced to abandon them in the spring of 1827. They again engaged in trapping on the Gila, following the stream down to its confluence with the Colorado and from thence to the Gulf of California, hoping to find a settlement there. Finding none, they struggled through Lower California to San Diego where they were made prisoners, and the elder Pattie died in his cell. James, the son, was finally released and succeeded in making his way by land through to

Vera Cruz, and then by water to New Orleans and Cincinnati. He reached his old Kentucky home worn and penniless after enduring six years of great peril and hardship.

Captain Jedediah Smith was the first white man to enter Arizona from the north. In August, 1826, he started with sixteen men from Salt Lake and traveled to the Virgin River in Arizona, not far from its junction with the Colorado, near the southwestern corner of Utah. In 1830, Smith and his two partners sold out their northern fur company and entered the Santa Fe trade. On a trip from St. Louis to Santa Fe he separated from his companions, in search of water, and was killed by a band of Comanche Indians on the banks of the Cimarron.

Kit Carson, the most noted scout and guide of his time, had his first Indian fight with Apaches on the Salt River in Arizona, in 1827. He married a Mexican woman and lived at Taos, New Mexico. He was guide for Col. Fremont and dispatch bearer from California, for the Government, through a badly infested Indian country, and came through it unscathed.

Col. John C. Fremont, explorer and pathfinder, made four trips through the mountains of the Far

West during the forties, and took an active part in the conquest of California. In 1849 he crossed Arizona by the Gila River route on his way to California where he lived for a time on a ranch. He was appointed governor of Arizona in 1878 but never saw actual service.

Among the more recent books, dating from and after the Mexican War and published at Washington, D. C., are Lieut. Emory's "Notes of a Military Reconnaissance," 1848, and "Report on the United States and Mexican Boundary Survey," three volumes, 1857; "The Pacific Railroad Reports," contained in thirteen large quarto volumes and published during the fifties; "Wheeler's Geographical Surveys West of the 100th Meridian," seven volumes, conducted during the seventies.

Annual Reports of the Secretary of the Interior, Commissioner of Indian Affairs and of the Indian Military Service, Smithsonian Institution, Bureau of Ethnology, Geology, Agriculture, Irrigation, and Reclamation, furnish a mass of information that is valuable historically. The numerous monographs on the Zuni and Hopi ceremonies and of pueblo and cliff dwelling ruins, by Dr. J. W. Fewkes, also belong to this group. Carl Buschman's and Buckingham

Smith's Indian philological studies, and the vocabulary and dictionary of the Navajo language, by the Franciscan Fathers at Saint Michaels, Arizona, are likewise important documents.

Other books of merit are Ward's "Mexico," two volumes, London, 1827; Hardy's "Travels in the Interior of Mexico," London, 1829; Pattie's "Narrative," Cincinnati, 1833; Kendall's "Texas Santa Fe Expedition," two volumes, New York, 1844; Gregg's "Commerce of the Prairies," two volumes, New York, 1844; Hughes' "Doniphan's Expedition," Cincinnati, 1847; Ruxton's "Life of the Far West," New York, 1849; Coyner's "Lost Trappers," Cincinnati, 1850; Bartlett's "Personal Narrative," New York, 1854; Stratton's "Captivity of the Oatman Girls," San Francisco, 1857; Froebel's "Seven Years' Travel in Central America," London, 1859; Domenech's "Seven Years' Residence in the Great Deserts of North America," two volumes, London, 1860; Cremony's "Life among the Apaches," San Francisco, 1868; Brown's "Adventures in the Apache Country," San Francisco, 1869; Bell's "New Tracks in North America," London, 1869; Davis' "Spanish Conquest of New Mexico," Doylston, 1869; Pumpelly's "Across America and Asia," New York, 1871; Peter's "Life

of Kit Carson," Hartford, 1873; Hinton's "Handbook of Arizona," San Francisco, 1878; Tyler's "History of the Mormon Battalion," Salt Lake, 1881; Bancroft's "History of Arizona and New Mexico," San Francisco, 1890; Bourke's "On the Border with Crook," New York, 1891; Bandelier's "Gilded Man," New York, 1893; Lummis' "Spanish Pioneers," Chicago, 1893; Wright's "Indians Taxed and not Taxed," Washington, 1894; Coue's "On the Trail of a Spanish Pioneer," New York, 1900; Chittenden's "American Fur Trade," three volumes, New York, 1902; Winship's "Journey of Coronado," New York, 1904; Twitchell's "Leading Facts of New Mexican History," two volumes, Cedar Rapids, 1911; Read's "History of New Mexico," Santa Fe, 1912; Prince's "History of New Mexico," Cedar Rapids, 1912; Reagan's "Don Diego," New York, 1914; McClintock's "History of Arizona," three volumes, Chicago, 1916; Gregory's "Navajo Country," Washington, 1916; Dale's "Ashley-Smith Explorations," Cleveland, 1919, et cetera.

Perhaps the rarest book of all is "Reid's Tramp, A Journal of Incidents During Ten Months' Travel Through Texas, New Mexico, Arizona, Sonora and California," published at Selma, Alabama, in 1858.

It is claimed that only four copies of the book are in existence, the bulk of the edition having been destroyed during the Civil War. The author was 1st Lieut. of Colonel Crabb's auxiliary filibustering expedition in Sonora, Mexico, in 1857, and was one of the few men who escaped the general massacre.

THE MUNK ARBORETUM

Made grove of eastern forest trees, Compton, California

The Munk Botanical Garden and Arboretum

IN 1906 I STARTED a botanical garden for growing domestic medicinal herbs, to find out how plants imported from other states would be affected when transferred to California soil and climate. Some native medicinal plants, like Anemopsis and Rhamnus Californica, were already established on the ground when the garden was begun, and were allowed to remain to give variety to the collection. Later on the experiment was extended to include many eastern plants, forest trees and shrubs.

The place chosen for making the experiment was a ten-acre lot near the village of Compton, in an agricultural district on an alluvial plain, seventy-six feet above tidewater and half-way between Los Angeles and Long Beach. The soil is a rich, sandy loam with some clay, filled with small bits of mica and some alkali in spots. Not a grain of coarse sand or gravel, nor a piece of any kind of rock, unless imported, can be found in an area of many miles. This locality has the benefit of the daily sea breeze from the Pacific Ocean during the summer months

and an occasional touch of frost during the winter. The frost rarely amounts to ten degrees and then only for a short time during the early morning, and seldom does any damage. The land lies midway between the frostless seashore and the foothill thermal belt. Apple trees are supposed to be benefited by frost and apples grow here to perfection, but citrus fruits thrive best where there is no frost.

When the garden was begun, a professional friend from Topeka, Kansas, paid me a visit. After showing him over the place and explaining the project, he immediately began to figure out my prospect of life, according to actuary rules, and decided that I was undertaking the enterprise too late in life to realize any benefit from it. I did not let his talk discourage me from going ahead and said that, even though the time was short, the work gave me pleasure by watching things grow; and even if it did not benefit me it would do somebody else some good after I was gone. He proved to be a false prophet as I have lived long enough to realize my expectations, while he departed this life many years ago.

As the trees found growing in Southern California are mostly of the evergreen variety, imported from tropical countries, I decided to make the test with

deciduous shade trees from our eastern forests. When I started to hunt for trees I ascertained that the kind of trees that I wanted were scarce and could not be obtained in the local market. However, I succeeded in finding a few native poplars, sycamores and willows and with these made a start.

I then sent east and procured an assortment of forest trees and shrubs from nurserymen and friends, also some new foreign varieties from the Bureau of Plant Industry. In planting the trees I was careful to avoid any formal method of arrangement but distributed them at irregular intervals, to give the grove the appearance of a natural forest. I wanted to see how the trees would be affected by the change in local conditions and gave them such attention only as was necessary to give them a good start in life. They all readily became established and grew rapidly so that after a lapse of fifteen years some of the trees have attained a diameter of two feet and a height of one hundred feet, and are covered with a thick canopy of foliage.

A winding brook meanders through the grove with here and there a footpath leading to some favorite spot. The spaces of sloping banks, level bottom land, open glens and sequestered glades dotted with trees

and shrubs, give it the appearance of an eastern woodland. Many kinds of birds and small four-footed wild creatures have been attracted to its shelter and made it their sanctuary. The little animals are not often seen as they usually travel at night, but their presence is made known by their tracks in the dust on the trails or the soft earth of the damp ditches.

An important feature of California horticulture is that you have to keep the soil in good condition by regulating the supply of irrigation water. In a country like California where it does not rain during eight months in the year and averages only fifteen inches of rainfall during the remaining four months, the water supply is an important factor and must be applied to the land artificially by irrigation, to make the soil fully productive. This essential element in this case is furnished by an artesian well that flows in a perennial stream without pumping. The flow of water is regulated by a casing cap and is supplied in any quantity that may be needed. The water is conducted over the ground in open ditches, by gravity flow. When the well is left open and the water is permitted to flow freely but is not used, it is discharged by a spillway over a rippling cascade as it

falls from the higher level of the well to the lower level of the brook, and flows on to the sea.

One advantage of a dry country is that weeds do not spread as they do in wet countries. Any plant that is brought from the humid east, where it has been accustomed to being drenched by rain every few days, cannot stand a prolonged drought and live. Naturally, some weeds must grow in all lands but those that are imported from countries where rains prevail, if they live at all, must become desert-bred before they can acquire the quality of drought resistance. Otherwise they must be nursed with water and cultivated in order to be able to endure. However, plants sometimes change their habits and will in time adapt themselves to drought so that they can live without much water. A familiar example of such a change in California is the common horehound (Marrubium vulgaris) which is an adopted child but flourishes as if it were native to the soil.

The Carolina poplar (Populus Carolinensis) is my favorite of all the forest trees that were tested in the experiment. The tree is a rapid grower and is tall, stately and clean. Its glossy foliage sparkles in the sunlight, and its leaves, which are scarcely ever

still, have a musical rustle. It is a handsome looking tree throughout the year, draped in a garment of green during the spring and summer, golden yellow in the fall when its foliage shows the autumn tints, and white in winter as its bare, gray branches stand gracefully outlined against the blue sky. The tree top is the last to acquire leaves in the spring and is also last to lose them in the fall. After most of the leaves upon the lower branches have fallen off, the top limbs stand up like flag poles in a glorious array of shimmering yellow leaves, like an army with banners fluttering in the breeze. When the autumnal colors of red and yellow appear in the foliage, the change is called oxidation, which is an effect and not a cause, and denotes that the leaves have reached their full maturity and are passing into a state of decay. This action is seen en masse only in deciduous trees when they shed their leaves in the fall of the year and carpet the ground in varying shades of gold, russet and brown.

If at this time the weather happens to be hot and dry, the leaves do not have their natural, bright colors but shrivel up and fall off quickly. It is only when the weather is cool, damp and cloudy that their

bright colors develop and the leaves cling to the branches for any length of time.

October is the month of arboreal beauty in California, the same as in the east, as far as it concerns deciduous forest trees, but does not require any help from frost to produce its gorgeous effect. Such a grove in California is rare, indeed, and its appearance is in striking contrast to the prevailing groves of evergreen eucalyptus trees introduced from Australia, with their somber colored foliage of dust laden leaves waiting for their annual bath that is given by the winter rains.

Nature's arboreal pageant is a pleasing spectacle to contemplate. It starts early in the spring with bursting buds of many kinds of leaves and flowers, that spread a delicate drapery over the trees in variegated colors and mark the beginning of Nature's annual carnival. The mild winter weather of the California summerland does not appear to hurry Nature in the least. The trees remain dormant all winter long, for that is their nature, and do not act until they are ready, when, just at the right time, the buds suddenly start to swell and grow in a new creation and nothing can stop them. Nature's order

of procedure is perfect in every respect and each variety of leaf and flower finds its assigned place in the moving procession at precisely the right time to give its magic touch of color and completes the harmony of the wonderful panorama.

The predominating color in the autumn foliage of a transplanted California forest is yellow, yet there are also many bright splashes of red to be seen upon the trees. The trees that are the most conspicuous in yellow are prominent in about the following order: Carolina poplar (Populus Carolinensis), yellow poplar (Liriodendron tulipifera), black ash (Fraxinus Americana), sugar maple (Acer Saccharum), slippery elm (Ulmus fulva), basswood (Tilia Americana), buttonwood (Platanus occidentalis), and the beech tree (Fagus Americana); while the tallow tree (Sapium sebiferum), red oak (Quercus rubra), sweet gum (Liquidambar styraciflua), wahoo (Enonymus atropurpureus), poison sumac (Rhus Toxicodendron), and poke root (Phytolacca decandra) are clothed in brilliant red as if growing on their native heath.

There is no handsomer plant found growing anywhere than the poke root with its crimson stems, intermingled green and scarlet leaves, white flowers

and shiny black berries, all present in the living plant at the same time. It commences to change color in midsummer; first in the stalks, then it creeps to the under side of the leaves and over the top until the entire plant is a glorious blaze of flame. On some of the trees the foliage is about equally blended in red and yellow, and often in the same leaf. This peculiarity is strikingly true of the poison sumac, maple and tallow tree. The difference in foliage coloration begins on the lower branches and travels upward to the top of the tree in successive bands, one above the other; and again a variety of tints are mingled indiscriminately in a riot of bright colors on all parts of the tree.

Starting a grove of deciduous forest trees seemed to be a necessary preliminary in preparing suitable ground for the reception of eastern wildwood plants, in order to provide them with their accustomed leaf mold and shade. Notwithstanding that this work was given time and thoroughly done, the new plants did not take kindly to the change and most of them perished in a short time. My first order was for one hundred sets each of golden seal (Hydrastis Canadensis) and ginseng (Panax quinquifolium) from an eastern nursery. They were received in

prime condition, carefully planted and made a good start. After several weeks of promise had passed, they were suddenly stricken in one night with a blight that wilted them to the ground and only a few specimens survived. The few plants that lived made a feeble struggle to grow and lasted one year, when they too died.

Many different kinds of woods plants were procured at different times from eastern collectors and planted, but they nearly all met a like fate, which was a great disappointment. Many of the plants seemed to do well the first year but did not establish themselves. No sufficient reason could be ascribed for their failure only that they did not seem to fit their new environment. A few of these plants, as I now recall them, were black cahosh (Cimicifuga racemosa), May-apple (Podophyllum peltatum), bloodroot (Sanguinaria Canadensis), liverwort (Hepatica triloba), partridge berry (Mitchella repens), wild ginger (Asarum Canadensis), trailing arbutus (Epegea repens), wintergreen (Gaultheria procumbens), and yellow lady slipper (Cypripedium pubescens).

About the same time I planted a few periwinkle vines (Vinca minor) in another section of the grove.

These grew rank and spread rapidly by runners into a thick mat of vines that now covers the ground. This plant seems to be right at home and thrives luxuriantly in dense shade and a soft bed of leaves, the very conditions that seemed to be unfavorable to the other plants. The periwinkle vine makes an attractive midwinter cover crop of trailing vines, green leaves, and blue flowers showing delicately among the bare trees and brown leaves on the forest floor. Of the climbing vines only three kinds became established and continued to endure: the wild yam (Dioscorea villosa), American ivy (Ampelopsis quinquifolium), and yellow parilla (Menispermum Canadensis).

The shrubs and herbaceous plants that were planted in the open garden fared better and some of them prospered exceptionally well. Among these are the spice bush (Larus benzoin), elderberry (Sambucus Canadensis), prickly ash (Xanthoxylum Americanum), bayberry (Mirica cerifera), black haw (Vibernum prunifolium), witch hazel (Hamamelis Virginica), paw paw (Asimina triloba), English hawthorn (Crategas oxycantha), Oregon grape (Berberis Acquifolium), Scotch broom (Cytisus scoparious), Canadian hemp (Apocynum cannabinum), queen of the meadow (Eupatorium perpurum), iron weed

(Veronia Noveboracensis), Solomon's seal (Polygonatum bifeorum), boneset (Eupatorium perfoliatum), cranesbill (Geranium maculatum), butterfly weed (Aselepias tuberosa), Indian pink (Spigelia Marilandica), spikenard (Aralia racemosa), mullen (Verbascum thapsus), and elecampane (Inula Helenium).

Some desert plants like the Apache plume (Fallugia paredoxa), green bells (Lycium pallidum), desert willow (Chilopsis lineares), creosote bush (Covillea tridentata), burro thorn (Condalia spinosa) and Perezia Arizonica have also done well.

The plants above mentioned are only a few out of the many that grow in the garden but are sufficient to indicate the wide scope of production which the garden affords. Some of the plant families are represented by several different varieties but all having similar peculiarities. There is every kind of mint, several kinds of sumac and dogwood, a dozen or more varieties of Berberis and a like number of goldenrods.

Many of these plants show unusual size and vigor. There is a spicewood bush growing in the garden that is larger than any I ever saw growing in Ohio, where it is common and the school children gather the twigs

in winter to chew and to make tea. The same is true of pokeroot which excels in size and beauty any such stalk that I ever saw growing elsewhere. Another remarkable example is the iron weed. As found growing in an eastern meadow, it is from two to four feet high, while here it attains a height of from eight to ten feet and a head of dark purple blossoms as big as a water bucket. The common elder likewise thrives luxuriantly. In the east it has a corymb of white blossoms that is the size of a saucer while here it is as large as a dinner plate. It fruits freely but the greedy birds eat the berries before they are half ripe.

One reason for growing medicinal plants is to prove their value as medicines. It has been remarked that a change of environment might impair their potency. According to my experiments they do not lose any of their efficiency and if there is any difference it is in favor of the new habitat.

The pleasure of watching this garden grow has been a daily joy for years and I hope that it may continue thus for many years more.

Having a good eye for levels, I did not have to hire an engineer to run a line for an irrigating ditch. I planned and dug the ditch myself and had the water

touch every foot of land in a ten acre lot by gravity flow.

I started planting trees before completing fully my plans for making a grove and garden and let circumstances determine its development.

The forest is fringed on its outside border by a row of tall trees and tapers downward and inward by other smaller trees and shrubs, to a low spot in the center of the garden that is given over to herbaceous plants. This arrangement gives the grove the shape of a big bowl, which makes it favorable for inspection. Standing in the center of the garden, the entire bowl is brought into view by one sweeping upward glance that makes a striking picture.

The garden is distant one-quarter of a mile from the nearest neighbor and is also the same distance from any public highway, which isolation was sought when the land was purchased.

The grounds are entered from a paved boulevard, over a private right-of-way that runs through cultivated fields of sugar beets, barley and alfalfa. The road is surfaced with decomposed granite and shaded by a row of stately poplar trees. The road is hard and smooth and the traffic not sufficiently heavy to cut it up into ruts and chuck holes. It never gets

muddy in the rainy season, nor dusty during the dry summer.

The spirit of grabbing seems to be rampant in the land, and big business tolerates no opposition to its schemes. With the encroachment of the Los Angeles industrial district, already crowding in from the north, and a threatened invasion of noisome derricks from the Signal Hill oil field of Long Beach from the south, it is a question how long the coveted privacy and beauty of the grove and garden will endure.

Whenever two competing objects become inharmonious and antagonistic, the artistic must invariably yield to the economic, and ever thus is beauty sacrificed and destroyed.